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ABSTRACT

Papers included in this volume include the following: "Prosodic Aspects of Hearing-Impaired Children: A Qualitative and Quantitative Assessment" (Teresa Y. C. Ching); "The Role of Linear Order in the Acquisition of Quantifier Scope in Chinese" (Thomas H. T. Lee); "Some Neglected Syntactic Phenomena in Near-standard English" (Mark Newbrook); "The Effect of Explicit Instruction on the Acquisition of English Grammatical Structures by Chinese Learners" (Yan-ping Zhou); and "An Essay on Toffee Apple and Treacle Tart, Being an Imitation of Cockney Punning for TOEFL and TEASL" (Louise S. W. Ho). (Author/VWL)

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Editorial Note

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PROSODIC ASPECTS of HEARING-IMPAIRED CHILDREN: A QUALITATIVE and QUANTITATIVE ASSESSMENT

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I. Introduction

The virtual lack of a standardized and clinically useful method to assess the prosodic skills of profoundly hearing-impaired children is a major problem faced by all workers concerned with deaf education in Hong Kong. This problem is imminent, not only because of difficulties in adopting foreign methods due to typological differences between languages, but also because prosodic skills essentially affect other areas of language development. It is of particular importance to the child, whose cognitive development is also closely related to his expressive and receptive skills.

I.1 Language Typology

Methods of assessment of speech and language have been developed in many English-speaking areas (see for example, Grunwell, 1987; Ingram, 1976, 1981; Ling, 1976; Crystal, 1982). A major characteristic of these lie in the over-emphasis of segmental skills. Apart from the Crystal publication, supra-segmental or prosodic skills have been much over-looked and underestimated.

In Hong Kong, the language situation makes this problem more acute. Cantonese is the spoken mother-tongue. Unlike English, Cantonese is a tone language. This means that the same consonant-vowel combination can convey quite different messages, depending on the pitch pattern with which it is produced. For example, the segmental combination /ji/ can mean 'clothing', 'chair', 'meaning', 'child', 'ears' or 'two', depending on whether the pitch pattern adopted is one of high level, high rising, mid level, low falling, low rising or low level respectively. Figure 1 shows the fundamental frequency patterns of the six tones produced by a female native speaker of Cantonese. A consequence of overlooking this linguistically significant aspect in any programme of language intervention leads to defective prosodic skills, the most essential aspect of language skills.

I.2 Prosodic skills

Prosody refers to pitch, intensity and duration. The linguistic uses of these for distinctive purposes in Cantonese are shown in the lexical tone patterns (as indicated in Figure 1). The interactions between pitch and intensity contribute to tonal distinctions and accentuation. Difference in duration is also a significant cue for tonal distinctions (see Figure 2).

In communicative terms, prosodic skills contribute to pragmatic skills for signalling accentuation. Articulatory skills are also dependent on adequate excitation of the vocal tract, which is in turn related to the mastery of an efficient airstream mechanism. Grammatical skills in the use of different sentence types, for signalling boundaries and for performing various speech acts again hinge on the effective use of prosodic skills in production and reception.

Research on 'deaf speech' have shown that prosodic errors essentially lead to poor intelligibility (see e.g. McGarr and Osberger, 1978). Thus, defective prosody can be a major source of difficulty experienced by the deaf who attempt to communicate using speech.

Prosodic skills are among the first skills mastered by the developing infant. Normally hearing babies develop the ability to control the larynx, to use voice quality and pitch changes to communicate long before a contrastive segmental system can be established (Abberton, 1985; Crystal, 1975; Fourcin, 1978). Literature on speech acquisition by Cantonese (Tse, 1978) and Mandarin (Chao, 1951), and many other tone-language-speaking children (see Li and Thompson, 1978 for a review) provide ample evidence with regard to normal acquisition. The preligually deaf child, however, is often characterised by poor phonatory control. The productions are either 'monotonal' or marred by erratic pitch variations which drastically affect comprehensibility. Intervention to foster speech development must be based on the natural acquisitional sequence.

I.3 Hearing-impairment

Auditory disability often leads to degradations in frequency analytic ability in the peripheral hearing mechanism, so much so that speech patterns cannot be extracted from the acoustic flow of speech. Pitch patterns, which essentially signal lexical contrasts in Cantonese, are crucial to speech communication. The speaker must be able to make use of varying pitch patterns to convey differences in meaning, and understanding speech is also dependent on recognising these prosodic patterns.

All hearing-impaired listeners have residual hearing, which can be usefully employed especially in conveying prosodic differences. The frequency region of usable hearing corresponds well with the fundamental frequency range of normal speakers (see Figure 3). Profoundly hearing-impaired children can be taught to perceive and produce lexical tones in Cantonese (Ching, 1987) if the auditory input can be presented in a clear and usable manner (Fourcin, 1987). For those who depend on lipreading for understanding speech, fundamental frequency information is most useful because varying pitch patterns cannot be seen on the face of the speaker (Rosen et al, 1981; Grant, 1987). Even much greater benefit is obtainable by a lipreader in a Cantonese-speaking environment (Ching, 1985, 1988).

II. Assessment of prosodic skills

The present work attempts to develop a qualitative assessment to profile prosodic skills of children with speech defects, and correlate it with a quantitative assessment of productive skills. The former is indebted to the PROP developed first by Crystal (1982), with much modifications to cater specifically for the Cantonese-speaking context. This present work also entails the use of the Visi-pitch to provide objective data for assessment. The aim is to devise a comprehensive description of prosodic skills for purposes of assessment and intervention.

Video-recordings of each subject were made in a sound-treated studio with one-side viewing window and mounted cameras. Each recording session consisted of a mother-child interation in a naturalistic conversational environment. The mother of each child was to elicit the child to tell a story using a picture story book, and also to talk about what they did over the past weekend.

The analytic approach involved firstly the transcription of the video-recording at the morphological and phonological/phonetic levels. Each sample was about three minutes of continuous speech. These transcribed material were then divided into tone units. An interlinear method was used to mark varying pitch contours, and information regarding voice quality, pitch range were also noted. Functional and non-functional use of pitch, length and intensity changes were also recorded.

For each subject, the results were summarized on a profile. The recordings were analysed individually by two experimenters, and then results were compared. There was good agreement.

The reliability of the profile description of each subject's performance was also assessed by reviewing other parts of the recordings of the same subject. A longer sample would be used for the construction of the profile to yield a more representative description if the original was found to be deficient.

II.1 Qualitative assessment

The following is a description of the profile used to describe prosodic skills in Cantonese. This is then illustrated by brief accounts of the production of two profoundly hearing-impaired children, aged 6;2 and 13;10 respectively.

The chart recognises three main aspects of the linguistic use of pitch in Cantonese. The analysis on the basis of TONE UNITS focus on the way in which the formal pitch/rhythm contour relates to grammatical structure. Tone units are bounded by pauses.

Incomplete tone units, such as false starts, are recorded separately. Indeterminate items are instances in which ambient noise or unwanted intervention make it difficult to decide whether the productions were complete tone units. These often happen in naturalistic conversational situations. Stereotyped instances are prosodic patterns which are fixed; nursery rhymes or quotes from TV commercials are some of the sources. Pitch patterns which are direct imitations of the stimulus, and obviously outside of what one would normally expect of the child, would be entered under Imitation in the chart.

All other utterences are analysed in sequence, directly in terms of the general grammatical structure. A tone unit may be equivalent to a clause, for example,

[ˎmˊpeiˉjɔ˩] 'I don't want to give it away'

or to a phrase, for example,

[ˉhakˉsikˎhɑi] 'black shoes'.

There are also instances of tone units whose grammatical structure is a single word, for example,

[ˎsyˊt'iu] 'potato chips'

or a syllable in a di-syllabic word, as in

[ˉkei] 'plane' when [ˉfeiˉkei] aeroplane'

was intended. (This was only evident when the utterance which followed was the full form [ˉfei ˉkei] 'aeroplane'.)

No reference is made to the functions of the tone units. These warrant much more lengthy treatment on their own. Nevertheless, contextual and attitudinal contexts might be listed under Others when contextual information contribute to the evaluation of speech. Number of occurrence can also be tallied.

TONE refers to two aspects of laryngeal control, adequate phonation in an appropriate register, and systematic use of fundamental frequency variations in an appropriate range.

Tonal variations are recorded in the space between two lines, which represent the speaker's pitch range on the basis of auditory judgement. Utterances are then transcribed in sequence. In disordered prosody, pecularities of pitch range (narrowing, widening) and phonation type (breathiness, hoarseness, etc) might be expected, and must be noted on the chart.

Under tonal contrasts, the six pitch patterns (refer to Figure 1 for their fundamental frequency contours) responsible for making lexical contrasts in Cantonese are listed. Only pitch patterns used distinctively are noted down. Phonetic variants are not subclassified, unless these fall outside the normal child and adult usage.

Tonal contours occurring in an especially narrow range must be recorded, as these might give rise to uncertainty as to whether a high rising or low rising tone was used, or whether the tones were falling or level.

The third section refers to the use of INTONATION and ACCENTUATION on the sentence and word level, particularly to the overall pitch/rhythm pattern of the utterance, including all particles, which are an essential feature of spoken Cantonese. Many of the grammatical structures need to be pronounced in the appropriate intonation for them to be understood as statements or questions. Particles must also be used with the correct intonational contour for correct interpretation.

Relative loudness is directly related to the proportion of content words to function words (particles) in the utterance. Relative pitch of the words relate to the systematic modifications of tonal contours in certain contexts, and the pitch pattern of the functional particles. Tonal patterns are inherent contrastive patterns of content words and function words. Continuity applies specifically to words which are made up of more than one syllable.

The following brief accounts of the profiles of two profoundly hearing-impaired children illustrate the practical application of the approach.

SUBJECT 2

Subject 2 is a six-year-old child with an average hearing loss of 100 decibels over the four frequencies (250 Hz, 500 Hz, 1000 Hz and 2000 Hz). She has good filtering characteristics at frequencies below 500 Hz. (see Figure 4 for her pure tone audiogram).

Her profile (Table 1) shows that she produces clauses and phrases with a coherent prosodic structure. She has adequate phonatory control, and her fundamental frequency range is normal, both in its register and range. Her productions, however, demonstrate a reduced inventory of four-tone contrasts. Most of her productions were statements in the appropriate intonation. The lack of other sentence types may be a function of the activity at the recording session. Further analysis of the productions in other contexts and at other times would give a better picture of her productive skills. She produces inadvertently loud utterances when the situation does not necessitate it.

On the basis of the profile, intervention should initially concentrate on helping her to monitor the loudness of her own production. The usage of particles with the appropriate intonation for asking questions and for expressing her intentions need to be worked on. A third objective would be to help expand her tonal inventory.

SUBJECT 4

Subject 4 is a thirteen-year-old profoundly hearing-impaired child. She has a better pure tone audiogram than subject 2 (see Figure 4), but her filtering characteristics at low frequencies are not as good. She has an appreciable measure of phonatory control, but still has difficulties in voice production. This affects her voice register, and her control over the production of tonal contrasts.

Her profile as shown in Table 2 indicated that many of her utterances are incomplete. Her grammatical development is also delayed in comparison with subject 2. She has an uncomfortably high pitch register, with a falsetto voice quality and a very narrow pitch range. High pitch is her 'norm', with a high/low contrast in her production. Pitch changes adventitiously introduced in her speech indicated irregularity of vocal fold vibration. She uses no particles, and produces no variations in sentence type. Her tonal ability is restricted, and not much is gained even when a longer sample was taken.

It is essential to help her improve on her voice quality and bring her register down to the normal range. It is only then that word-level tonal contrasts may be introduced.

II.2 Quantitative assessment

A set of audio-recording was also made separately with each child by her teacher. This provides supplementary information on production skills of the child, and is particularly useful for analysis using the Visi-pitch. The audio-recordings provide a basis for statistical analysis for the fundamental frequency characteristics of the subject.

The chosen sample of data were input to an Apple IIe computer via a Visi-pitch and an analog-to-digital converter. Comprehensive statistics regarding the range and absolute frequency variations in the data can be calculated. In Figure 5, the frequency/intensity patterns of an utterance produced by subject 4 is shown side by side with that of her teacher. Summary statistics show that the child's range is 318 Hz - 412 Hz, an unusually high pitch register; as her young lady teacher has a fundamental frequency range of 120 Hz - 265 Hz.

A direct comparison illustrates the inappropriately high pitch range employed by the child. Frequency changes were not systematically used, and corresponding intensity changes as an acoustic cue for signalling the correct lexical tone was not used either.

III. Discussion

The profile description and the analysis using the Visipitch can be correlated with the aided and unaided audiograms of the subject to serve as a comprehensive case description. The possibility of storing the sample on a diskette allows easy access for up-dating of information, and for comparisons of the performance of the same subject at regular time intervals. Analysis results can also be stored on diskettes for easy access. Particularly for centres and schools where there are heavy caseloads, time and space are important considerations.

The possibilities of comparing data on-line also enables the teacher to devise training programmes suited to individual needs at different times. For example, one of the aims of the training programme for Subject 4 would be to work on bringing down the range of the child to an appropriate level and expanding the range. Subjective impressions must be substantiated by objective measurements in order for the teacher not to have unrealistic expectations, and to be sensitive to small but steady improvements. Achievements which can be charted permit systematic monitoring of progress.

The present work is concerned with assessing prosodic skills in production. Perceptual tests using specific speech patterns, natural and synthetic, are essential to a better understanding of the speech skills of the subject (Ching, 1988). The enhancement of prosodic skills can also be attained when a clear auditory input and a visual display are used (Ching, 1989). It is only through a clarification in input and an insight into the needs of the profoundly deaf that speech skills can be profitably improved.

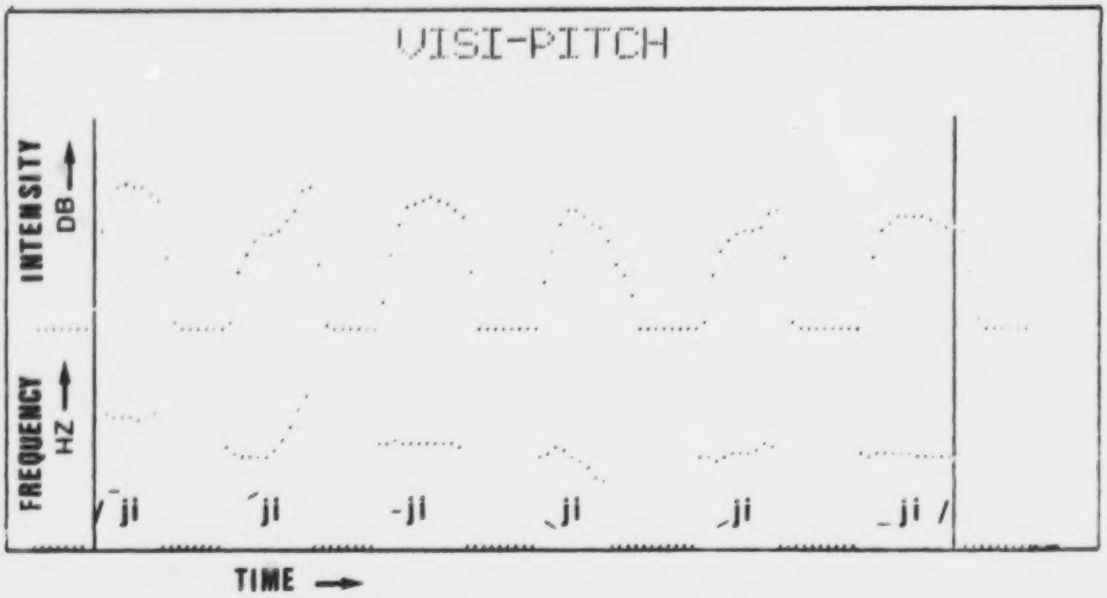

Figure 1 Fundamental frequency patterns of the six lexical tones in Cantonese, with their corresponding intensity patterns.

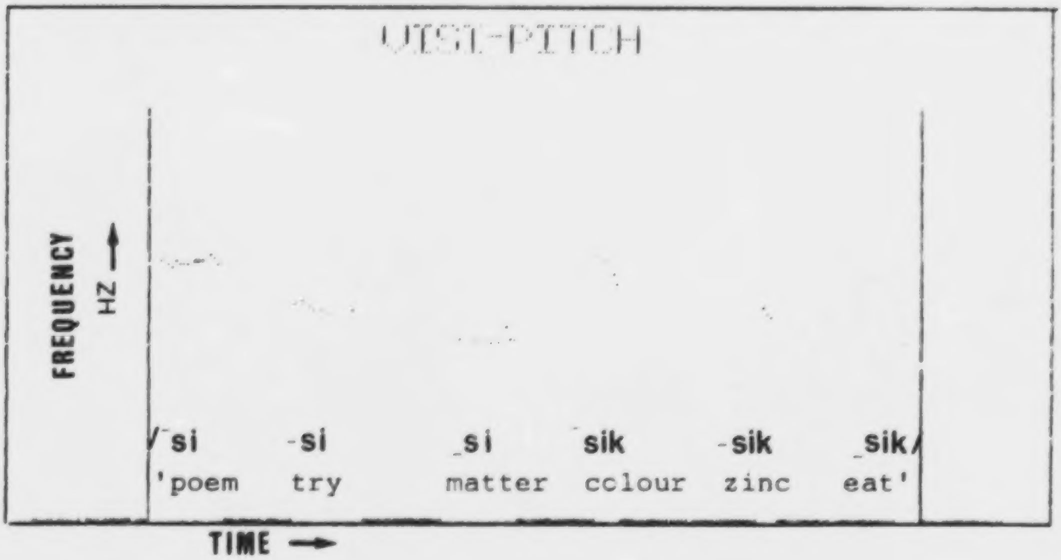

Figure 2 Fundamental frequency patterns of the three level tones in open and closed syllables. Final plosives are all unreleased in Cantonese, so the perceptual distinction between the two syllable types is essentially one of duration.

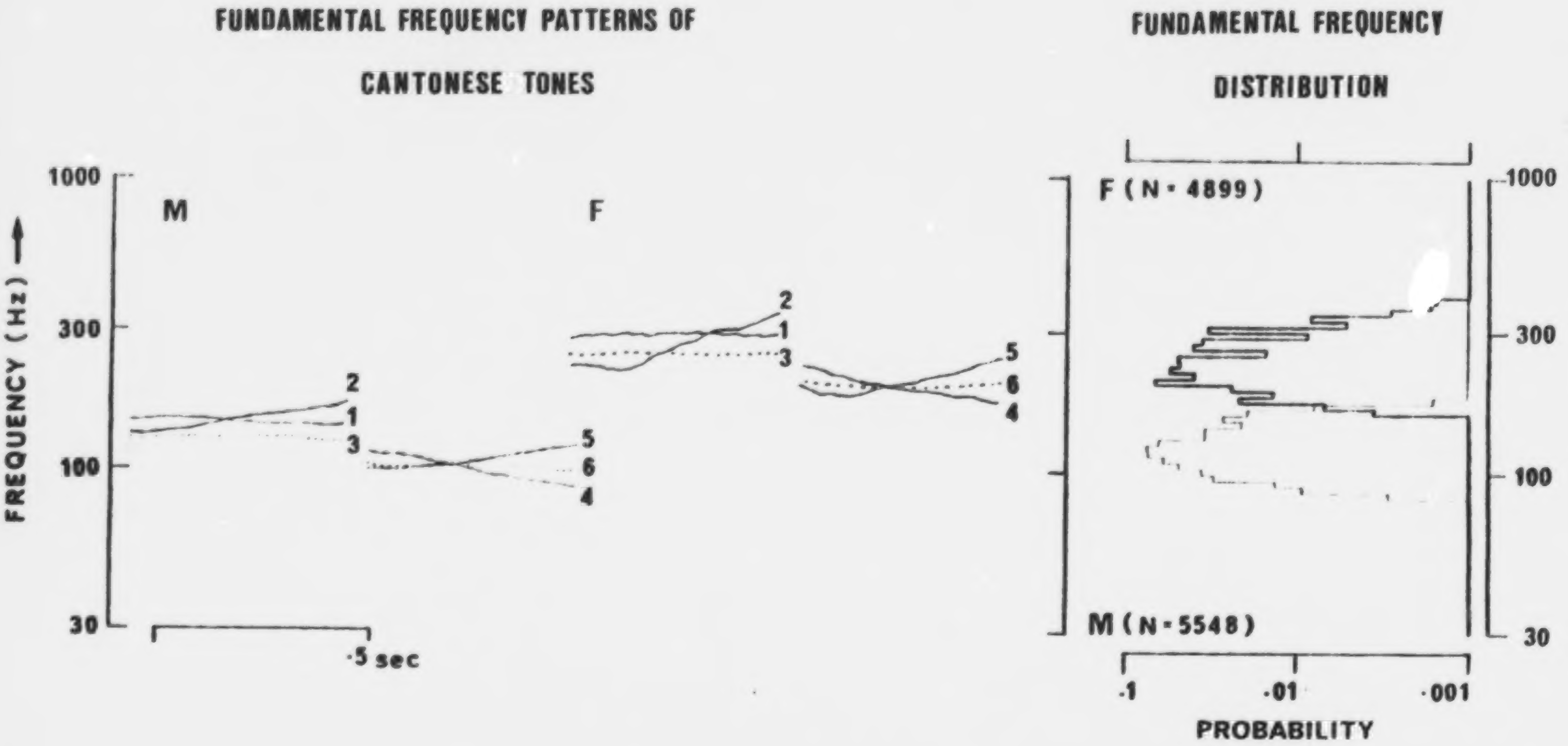

Figure 3 The six tones: 1 High Level; 2 High Rising; 3 Mid Level; 4 Low Falling; 5 Low Rising; 6 Low Level; produced by a male (M) and a female (F) speaker. N is the number of periods counted for constructing the distribution histograms. It can be seen that the fundamental frequency range for tonal variations is well within the range in which even the profoundly deaf will have some residual hearing.

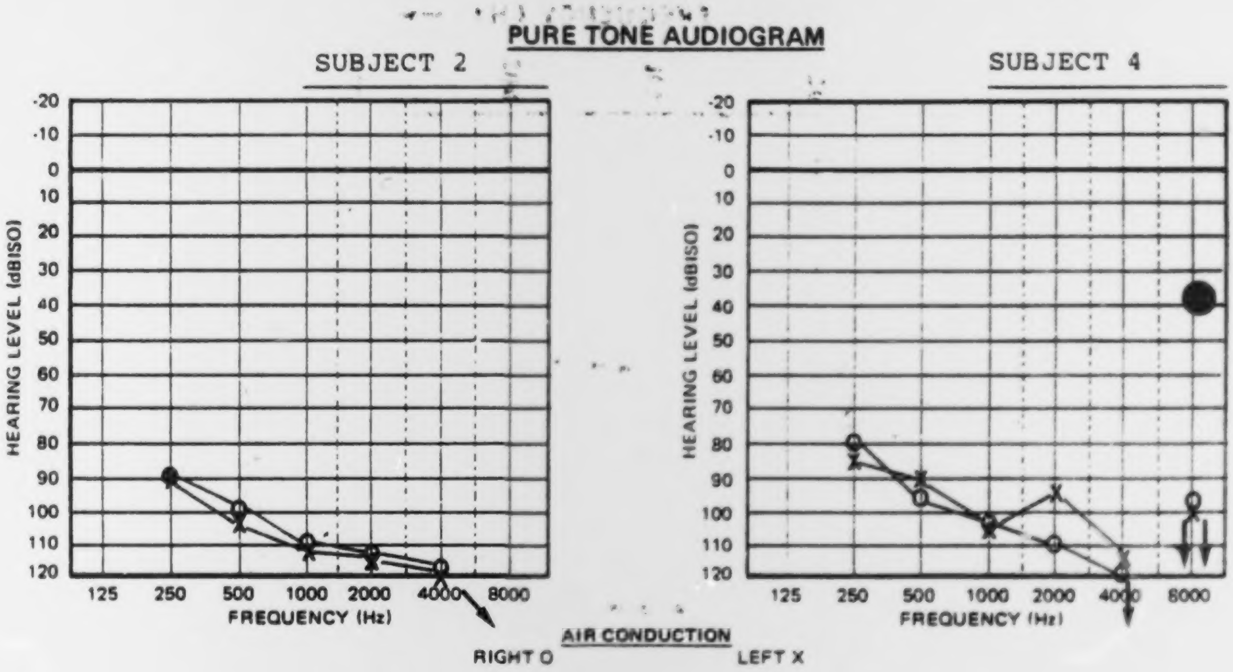

Figure 4 Pure tone audiograms for Subject 2 and Subject 4.

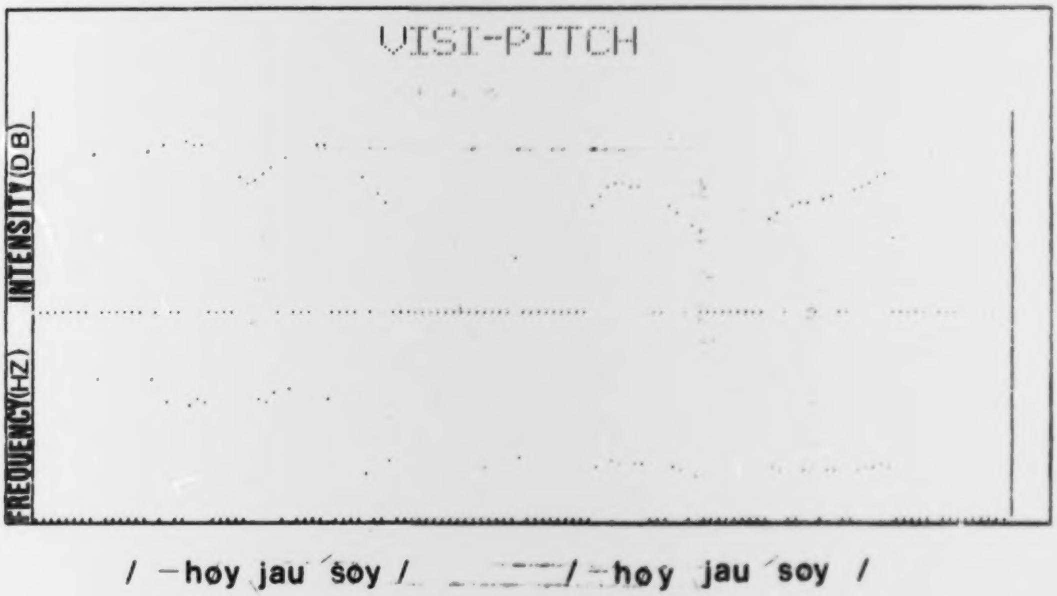

Figure 5 The fundamental frequency and intensity patterns of / -høy ˍjau ˊsøy / 'go swimming' produced by Subject 4 (left) and her teacher (right).

Name SUBJECT 2 Age 6;2 Sample date Type FREE PLAY

I Tone Unit	Incomplete 0	Indeterminate 0	Stereotyped 0	Imitation 0
	Clause 18			Others
	Phrase 14			
	Word 6			
	Syllable			Total 38

II Tone	Height \ Range	Wide	Narrow	Normal	
	High				
	Low				
	Normal			✓	
	Tonal Contrasts	Range Normal	Compressed	Imitation	Others
	High Level	✓			Glottal -ised
	High Rising	✓			Falsetto
	Mid Level	✓			Creaky
	Low Falling	✓			Voice
	Low Rising				
	Low Level				

III Intonation & Accent -uation	Sentence type	+	-	
	Statement	✓		Others Timing
	Question			Rhythm
	Recall			
	Command			
	Interjection			

Word	Relative loudness		Relative pitch		Tone pattern		Continuity	
	+	-	+	-	+	-	+	-
content		✓	✓		✓		✓	
function		✓	✓			✓	✓	

Other remarks

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Table 1 Prosodic profile of Subject 2

Name SUBJECT 4 Age 13;10 Sample date Type FREE PLAY

I Tone Unit	Incomplete 18	Indeterminate 2	Stereotyped 0	Imitation 0	
	Clause 13			Others	
	Phrase 16				
	Word 5				
	Syllable			Total 34	

II Tone	Height \ Range	Wide	Narrow	Normal	
	High		✓		
	Low				
	Normal				
	Tonal Contrasts	Range Normal	Range Compressed	Imitation	Others
	High Level		✓		Glottal-ised
	High Rising				Falsetto ✓
	Mid Level				Creaky
	Low Falling				Voice
	Low Rising				Erratic pitch variations
	Low Level		✓		

III Intonation & Accentuation	Sentence type	+	-	Others
	Statement	✓		Timing
	Question			
	Recall			Rhythm
	Command			chanting; inapp. utterance final lengthening
	Interjection			

Word	Relative loudness +	Relative loudness -	Relative pitch +	Relative pitch -	Tone pattern +	Tone pattern -	Continuity +	Continuity -
content	✓			✓		✓	✓	
function								

Other remarks

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Table 2 Prosodic profile of Subject 4

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The Role of Linear Order in the Acquisition of Quantifier Scope in Chinese*

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1. *Introduction*

In the linguistics and philosophy literature, it has long been observed that a salient property of quantifier noun phrases (QNP) such as *a story, two strings, every child* lies in their ability to exhibit relative scope (cf. e.g. Quine 1960, Lakoff 1971, Keenan 1971).[1] If a QNP falls within the scope of another, the former may be referentially dependent on the latter. This can be illustrated by the English sentence (1), which contains two QNPs - *a story* and *every child*. Depending on which QNP falls within the scope of the other, (1) can have two interpretations, given in (2a) and (2b).

(1) *A story* was read to *every child*.
(2) a. There is a x=story such that for all y=child, x was read to y.
    b. For all y=child, there is a x=story such that x was read to y.

In the interpretation (2a), *every child* is within the scope of *a story*; the former is said to have narrow scope, while the latter has wide scope: it was the same story that was read to every child. In the reading represented by (2b), where *a story* has narrow scope, the choice of referent depends on the choice of the child: different stories may have been read to different children.

The question as to how children of various ages interpret the relative scope of quantifiers is of considerable interest from the standpoint of learnability. The representation of scope requires theoretical constructs such as operators (e.g. there is a x, for all y) and variables (e.g. x, y), as well as well-formedness conditions governing the binding of variables.[2] It seems plausible to assume that abstract constructs such as operators and variables are not learned inductively, but are part of the initial state of the child. In other words, they might be among the substantive universals of Universal Grammar (UG). Following the spirit of Fodor (1980)'s argument, it is clear that children who do not possess the linguistic concepts of operators and variables would find it impossible to learn whether the language they are exposed to (e.g. English) displays scope ambiguity. This is because given a sentence like (1), children first of all need to have the means of representing the two scope interpretations of the sentence before they can detect scope ambiguity. The representation of scope possibilities presupposes the postulation of operators and variables in the first place.[3]

A further point that can be made is that even though the variable-binding property of QNPs may be endowed as part of UG,[4] it is possible that these innate properties are not available to the child at the outset. Rather they manifest themselves at a later stage as the child matures. As Borer and Wexler (1987) have observed, while children's grammar may be consistent with UG principles at all stages of its evolution, it is conceivable that some UG principles are not realized at particular stages because of maturational factors. It remains, therefore, for empirical investigations to ascertain whether children indeed grasp the scope property of QNPs early on in their development.

The acquisition of quantificational scope also deserves attention because the principles determining scope interpretation differ from one language to another. Quantificational scope is an area of grammar that shows parametric variation. A striking contrast between Chinese and English is that generally speaking, English permits scope ambiguity much more freely than Chinese. In English, the relative scope of QNPs in a clause is generally not uniquely determined by the relative position of the QNPs at S-structure.[5] Thus, it is not the case that in (1), the structurally superior subject QNP *a story* always has wide scope over the prepositional object QNP *every child*. Rather, either QNP may have wide scope. In Chinese, however, as first observed by S.F. Huang (1981), a strong isomorphism exists between S-structure and Logical Form (LF).[6] A subject QNP invariably has scope over an object QNP, as shown by (3). The sentence cannot have the interpretation (3b) where the object QNP *meige xuesheng* 'every student' has the subject QNP *yige jingcha* 'a cop' within its scope.

(3) a. Turan, yige jingcha zhuazou le meige xuesheng
suddenly one-CL cop arrest ASP every-CL student
"Suddenly, a cop arrested every student"

b. There is a x = cop such that for all y = student, x arrested y
c. *For all y = student, there is a x = cop such that x arrested y

Some languages may use linear precedence as a principle for scope interpretation, so that if QNP A precedes QNP B at S-structure, then A has scope over B at LF. As we will argue later, this is essentially the relevant principle for Chinese. For other languages such as English, linearity may be irrelevant. The fact that a QNP A precedes another QNP B at S-structure does not mean that the only scope interpretation is the one with A having wide scope. Given these crosslinguistic facts, one may assume that the parameters for the determination of scope may take on different values (e.g. different syntactic relations) across languages.

If languages vary in how quantifier scope is determined, how do children learn the scope interpretation principles of their native language? What initial principles do they adopt? Do they assume free scope order or do they regard scope order as given directly by the relative positions of the QNPs at S-structure? These are intriguing learnability issues which can only receive satisfactory answers when acquisition data is available for a variety of languages governed by different scope interpretation principles. The present research is intended to be a contribution to this line of inquiry. We will demonstrate empirically that linearity must be a strong principle assumed by Mandarin-speaking children in their understanding of scope. Below we outline the principles for determining quantifier scope in adult Mandarin Chinese before turning to the experimental study.

2. *Quantifier Scope in Mandarin Chinese*

The scope principles for Mandarin Chinese which we adopt for the experimental investigation are given in (4) (cf. J. Huang 1983, Aoun and Li 1987 for alternative analysis):

(4) Suppose A and B are QNPs, then
  a. if A asymmetrically commands B at S-structure, A has scope over B at Logical Form (LF) (A *commands* B if neither dominates the other and the first S node dominating A also dominates B);
  b. if A and B command each other and A precedes B at S-structure, A has scope over B at LF.

The first principle captures the clauseboundedness of the effect of quantification. Intuitively, a QNP cannot escape from its own clause to have scope over another QNP in a higher clause. Figures 1a and 1b illustrate structures where QNP_2 asymmetrically commands QNP_1. In Figure 1a, QNP_1 occurs within a sentential subject; in Figure 1b, QNP_1 is located within a relative clause modifying a subject NP. In both figures, QNP_2 commands QNP_1 since the first S-node dominating QNP_2 is S_o, which dominates S_1, the first S node dominating QNP_1. However, QNP_1 does not command QNP_2 because S_1 does not dominate S_o. Examples of these structures are given in (5-6).

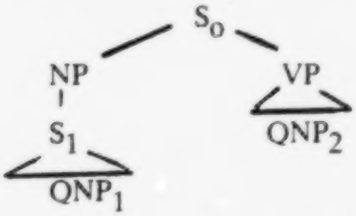

Figure 1a

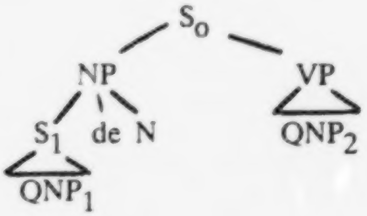

Figure 1b

(5) a. [xili jinnian qing le sange zhujiao]
department-in this-year hire ASP three-CL teaching-assistant
dui meige laoshi dou you haochu
to every-CL teacher all have benefit
"(the fact) [that the department hired three teaching assistants] this year is beneficial to every teacher"
  b. For all y = teacher, the fact that there are three x = teaching assistant such that the department hired x is beneficial to y.

c. *There are three x = teaching assistant such that for all
y = teacher, the fact that the department hired x is beneficial
to y.

(6) a. [shujia kan le yibai ben shu] de tongxue
summer read ASP one-hundred CL book NOM classmate
dedao meige laoshi de chengzan
obtain every-CL teacher NOM praise
"Students [who read a hundred books in the summer]
obtained the praise of every teacher."
b. For all y = teacher, students such that there are a hundred
x = book and students read x obtained the praise of y.
c. *There are a hundred x = book such that for all y = teacher,
students who read x won the praise of y.

In (5), QNP$_2$ is *meige laoshi* 'every teacher', while QNP$_1$ is *sange xuesheng* 'three students'. In (6), QNP$_2$ is also *meige laoshi* 'every teacher, and QNP$_1$ is *yibai ben shu* 'a hundred books'. By our scope principle (4a), only QNP$_2$ may have wide scope in both sentences. This is borne out by the data. Sentence (5) cannot be understood as "there are three teaching assistants such that for each of them, the fact that the department hired him/her is beneficial to every teacher". Likewise, (6) does not mean "there are a hundred books such that for each of them, student who read it obtained the praise of every teacher." The fact that asymmetrical command is the relevant principle for deciding the relative scope of QNPs in separate clauses can also be seen from the fact that linear order fails to play any role in these cases. Although QNP$_1$ precedes QNP$_2$ in (5-6), it is QNP$_2$ that takes wide scope.

Linear order is relevant for scope interpretation only when asymmetrical command does not obtain, as stated in (4b). If two QNPs command each other, the one that precedes will have wide scope. Below we examine four types of structures in which the QNPs mutually command. For all these cases, the linearity principle makes the correct prediction. Consider Figure 2, which shows a QNP in subject position (QNP$_1$) and another QNP in object position (QNP$_2$). A sentence whose core structure coincides with that in this figure has been given earlier in (3).

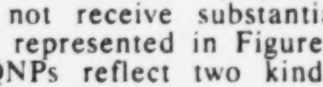

Figure 2

The scope principle (4b) says that QNP$_1$ will have scope over QNP$_2$. This is consistent with the facts of the unambiguous sentence (3), in which only *yige jingcha* 'a cop' may have wide scope. While on the surface (4b) seems to be factually accurate, it does not receive substantial support from such sentences as those represented in Figure 2. Notice that in the figure, the two QNPs reflect two kinds of relations. QNP$_1$ precedes QNP$_2$, and at the same time the former c-commands the latter (A *c-commands* B iff neither dominates the other, and the first branching node dominating A also dominates B). In other words, linear order is confounded with c-command in these structures. To identify the independent contribution of linearity in scope relations, we need to turn to sentences where neither of the mutually commanding QNPs c-commands the other. Some of these cases are represented in Figures 3 and 4. In Figure 3, QNP$_1$ is a preverbal prepositional object and QNP$_2$ a postverbal object (either a direct object or a prepositional object). In Figure 4, both QNPs are prepositional objects in preverbal position. The structure in Figure 3 is illustrated by (7-8), while that of Figure 4 is exemplified by (9).

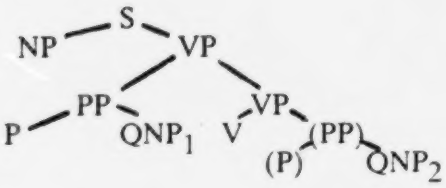

Figure 3

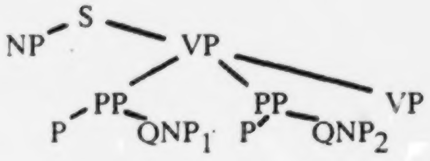

Figure 4

(7) a. Wo changchang [dui liangge nanren] baoyuan meige nuren
I often to two-CL male complain every-CL woman
"I often complain to two men about every woman"
b. There are two x = male such that for all y = woman,
I often complain to x about y.
c. *For all y = woman, there are two x = male such that
I often complain to x about y.

(8) a. Ta [ba yizhong yanse] tu zai meizhang zhuo shang
s/he BA one-CL color paint at every-CL table on
"S/he painted every table with a color"
b. There is a x = color such that for every y = table,
s/he painted y with x.
c. ?For every y = table, there is a x = color such that
s/he painted y with x.

(9) a. Daoyan [gen liangge sheyingshi] [cong meige jiaodu]
director with two-CL cameraman from every-CL angle
paishe changcheng
film Great-Wall
"The director filmed the Great Wall with two cameramen from every angle"
b. There are two x = camerman, such that for every y = angle,
the director filmed the Great Wall with x from y.
c. *For every y = angle, there are two x = camerman, such that
the director filmed the Great Wall with x from y.

In (7-9), on our definition of c-command, neither QNP c-commands the other. The interpretations given in (7b, 8b, 9b) and the ill-formedness of the readings (7c, 9c) show that generally, in accordance with the linearity principle (4b), it is the QNP that precedes that has wide scope.[7] The marginal status of (8c) suggests that perhaps in some configurations (in this case the *Ba*-construction), scope ambiguity may be possible. We will return to this issue in our discussion of the experimental findings.

One last type of structure that reveals the role of linear order is that given in Figure 5, where both QNPs occur postverbally, one as direct object and the other as prepositional object. (10) gives an example of this structure. On one analysis of the sentence, the verb and the direct object form one constitutent V', which then combines with a PP to form VP.

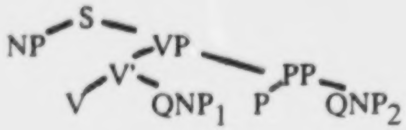

Figure 5

(10) a. Laoshi song le liangben shu gei meige tongxue
teacher give ASP two-CL book to every-CL classmate
"The teacher gave two books to every classmate"
b. There are two x = book such that for all y = classmate
the teacher gave x to y.
c. For all y = classmate, there are two x = book, such that
the teacher gave x to y.

If our constitutent analysis is correct, neither QNP c-commands the other. By (4b), QNP_1 should take wide scope. This is in fact one of the two interpretations of the sentence. However, unlike sentences such as (3, 7, 9), which are unambiguous, more than one scope reading is possible with sentences like (10), as first observed by Aoun and Li (1987). Suffice it to say at this point that the linearity principle allows us to predict some, if not all, of the scope interpretations of a clause and that the principle does not make false predictions. Further observations will be made about scope ambiguity in later sections.

3. *Children's Understanding of Quantifier Scope*

An earlier study (Lee 1986) investigated how Mandarin-speaking children aged between three and eight comprehended the relative scope of QNPs in subject and object positions, i.e. sentences represented by Figure 2. A major finding of the study was that Chinese children probably interpreted QNPs as inherently referential; clear evidence for the variable-binding property of QNPs was not observed among the children until after five. In other words, given a sentence such as (11), three- to five-year-olds interpreted *yige dangao* 'a cake' as referring to a specific entity.

(11) a. Meige xiaohai dou zai chi yige dangao
every-CL child all ASP eat one-CL cake
"Every child is eating a cake"

b. For all x = child, there is a y = cake such that
x is eating a cake.

The reading according to which different children are eating different cakes was clearly evidenced only in the older age groups. The study, however, failed to establish the scope interpretation principles assumed by children once the variable-binding property of QNPs is understood. The subject QNP both precedes and c-commands the object QNP (cf. Figure 2), and to the extent that children interpreted QNP$_1$ as having wide scope, it is unclear whether they were following linear precedence or c-command.

3.1 *Test Material*

To overcome the inadequacies of the earlier study, the test sentences of the present experiment include QNPs that do not show any c-command relationship, i.e. those illustrated in Figures 3 and 5. Three sentence types were used, as given in (12-14).[8] The first sentence type shows QNP$_1$ in a preverbal locative phrase (a prepositional phrase headed by *zai* 'at') and QNP$_2$ as a postverbal object. As observed earlier (cf. sentence (7) and Figure 3), this type of sentence is unambiguous, with QNP$_1$ having scope over QNP$_2$.

(12) Sentence Type I (*zai*-sentences)

a. X zai *yige dengzi* shang fang *meigen shengzi* (EA)
at one-CL stool on put every-CL string
"X puts every string on a stool"
b. X zai *meige dengzi* shang dou fang *yigen shengzi* (AE)
at every-CL stool on all put one-CL string
"X puts a string on every stool"
c. X zai *yige xiaohai* shenshang gai *meitiao maojin* (EA)
at one-CL child body-on lay every-CL towel
"X lays every towel on a child"
d. X zai *meige xiaohai* shenshang dou gai *yitiao maojin* (AE)
at every-CL child body-on all lay one-CL towel
"X lays a towel on every child"

The second type of sentence involves QNP$_1$ as direct object and QNP$_2$ as a postverbal object of a locative phrase (a prepositional phrase headed by *zai* 'at'). As discussed earlier (cf. sentence (10) and Figure 5), two scope interpretations are possible for these sentences, with the linearity principle predicting only one of the two readings.

(13) Sentence Type II (V-sentences)

a. X fang *yigen shengzi* zai *meige dengzishang* (EA)
put one-CL string at every-CL stool-on
"X puts a string on every stool"
b. X fang *meigen shengzi* zai *yige dengzishang* (AE)
put every-CL string at one-CL stool-on
"X puts every string on a stool"
c. X gai *yitiao maojin* zai *meige xiaohai* shenshang (EA)
lay one-CL towel at every-CL child body-on

"X lays a towel on every child"
d. X gai *meitiao maojin* zai *yige xiaohai* shenshang (AE)
lay every-CL towel at one-CL child body-on
"X lays every towel on a child"

The third sentence type used in the experiments is the *Ba*-construction illustrated earlier by sentence (8) and Figure 3. In this sentence type, QNP_1 serves as the object of the preverbal *Ba*-prepositional phrase, while QNP_2 functions as the object of a postverbal locative phrase (a prepositional phrase headed by *zai* 'at'). For this sentence type, the dominant reading is recognized to be that with QNP_1 having wide scope, and the interpretation with QNP_2 having wide scope is considered marginal.[9]

(14) Sentence Type III (*Ba*-sentences)

a. X Ba *yigen shengzi* fang zai *meige dengzi* shang (EA)
BAone-CL string put at every-CL stool on
"X puts a string on every stool"
b. X Ba *meigen shengzi* dou fang zai *yige dengzi* shang (AE)
BAevery-CL string all put at one-CL stool on
"X puts every string on a stool"
c. X Ba *yitiao maojin* gai zai *meige xiaohai* shenshang (EA)
BAone-CL towel lay at every-CL child body-on
"X lays a towel on every child"
d. X Ba *meitiao maojin* gai zai *yige xiaohai* shenshang (AE)
BAevery-CL towel lay at one-CL child body-on
"X lays every towel on a child"

In the test sentences (12-14), X stands for the name of the child subject. There are two prop settings corresponding to each sentence type, one involving the placement of strings on stools, and the other requiring the positioning of towels over the bodies of dolls. The props are illustrated in Figures 6 and 7. The (a,b) sentences in (12-14) refer to the prop setup in Figure 6, while the (c,d) sentences correspond to the props in Figure 7.

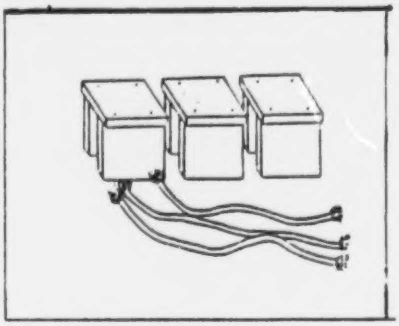
Figure 6

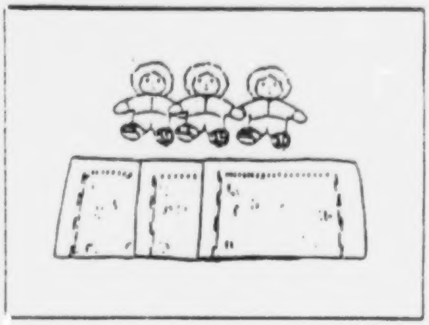
Figure 7

For each sentence type and prop setting, two quantifier orders were used, an EA order with an existential QNP preceding a universal QNP, as well as an AE order with a universal QNP preceding an existential QNP. The (a) and (c) sentences in (12-14) show EA order, whereas the (b) and (d) sentences display AE order. A total of 3 (sentence type) x 2 (prop setting) x 2 (quantifier order) = 12 sentences were employed.[10]

3.2 *Procedure*

117 Mandarin-speaking children aged between three and eight were drawn from two kindergartens and two primary schools in Beijing. The subjects included 16 three-year-olds, 21 four-year-olds, 21 five-year-olds, 19 six-year-olds, 20 seven-year-olds, and 20 eight-year-olds. In addition, a group of adults were tested as control.

The children were interviewed individually, each for about 20 minutes. They were shown the props by the writer and another researcher, who is a native speaker of Mandarin, and the test sentences were read to them. The subjects were then asked to act out the meaning of the sentences. Only act-out tasks were used, because in Lee (1986), it was found that children were much more consistent in act-out tasks than in picture identification tasks when responding to sentences containing more than one QNP. In the experiment, the prop settings and the test sentences for each prop setting were randomized and were used together with some other picture-identification items not directly related to the relative scope of QNPs.

The experiment has a four-part structure summarized as follows:

Part I: Training tasks
    a. two training sentences for toy manipulation
    b. two training sentences for picture identification
Part II: Picture identification tasks (two sentences)
    Act-out Tasks
    Prop Setting A (cf. Figure 6): three sentences
    Prop Setting B (cf. Figure 7): three sentences
Part III: Picture identification tasks (two sentences)
    Act-out Tasks
    Prop Setting B (cf. Figure 7): three sentences
    Prop Setting A (cf. Figure 6): three sentences
Part IV: Picture identification tasks (two sentences)
    Act-out Tasks
    Prop Setting B (cf. Figure 7): three sentences
    Prop Setting A (cf. Figure 6): three sentences

The experimental procedure for adults differed slightly from that for children. Adult subjects were interviewed in groups of five to six rather than individually. Instead of using the subject's name in the position of X in the test sentences, the morpheme *qing* 'please' was used as X. Adults were shown the props and were asked to represent their interpretation schematically with pencil and paper (e.g. using lines to represent strings and rectangular boxes to symbolize stools).

4. *Results*

4.1 *Predictions based on the Linearity Principle*

If the linearity principle (4b) is correct, then one should predict that the wide scope of QNP_1 is available for all the test sentences. For unambiguous sentences such as the *zai*-sentences in (12) (Type II, cf. Figure 3), one should expect QNP_1 to predominantly receive wide scope interpretation in the adult and older age groups. For sentences where ambiguity exists, perhaps marginally, such as the V- sentences of (13) (Type II, cf. Figure 5) and the *Ba*-sentences of (14) (Type III), the wide scope reading of QNP_1 should at least show up as a major pattern in the adults and older subjects.

The children's performance, however, may show a task bias which will affect how they respond to sentences of the AE and EA orders. In the experiment, the subjects were shown three objects (stools or dolls) which refer to the location or goal of three other objects (strings or towels), and were asked to act according to their understanding of the test sentences. Earlier studies (cf. Donaldson and McGarrigle 1974) suggest that in such prop settings, children are likely to put objects in one-one correspondence without really attending to the linguistic clues in the sentence.[11] This potential danger may be especially evident in the youngest groups, who may not have acquired stable knowledge of the relevant linguistic principles. In other words, given a sentence of AE order, with a universal quantifier as QNP_1, the children may place strings and stools, or towels and dolls, in one-one correpondence, giving the semblance of a wide scope reading of QNP_1. This response may be a reflection of task bias rather than an understanding of the linearity principle. If a task bias indeed exists, then one would expect the younger children to pair the two sets of props irrespective of quantifier order, i.e. children's responses to the AE sentences may superficially resemble a wide scope of QNP_1 interpretation, and their responses to the EA sentences may seem to suggest a wide scope of QNP_2 reading. The predictions of our analysis are given in Table 1.

Table 1. Predicted Results based on Linearity and Task Bias

Sentence Type	Linear Order	Task Bias	Testing Case for Linearity
zai EA	wide scope of E	wide scope of A	yes
zai AE	wide scope of A	wide scope of A	no
V EA	wide scope of E	wide scope of A	yes
V AE	wide scope of A	wide scope of A	no
Ba EA	wide scope of E	wide scope of A	yes
Ba AE	wide scope of A	wide scope of A	no

According to the linearity principle, the first QNP should take wide scope irrespective of sentence type and quantifier type, as shown in column two of the table. If subjects act only under the influence of the task bias, they will respond as though they were opting for the wide scope of the universal quantifier, irrespective of quantifier order, as shown in column three. If the responses predicted by linearity happen to be also predicted by the task bias, as is the case with all the AE sentences, the result will not tell us the precise role of linear order in the children's interpretation. If, however, the responses based on linearity are exactly the opposite of that due to task bias, as in all the EA sentences, then evidence for the wide scope interpretation of the existential quantifier can be construed as a very strong indication that children are following linear precedence in interpreting scope. The sentences that inform us of the role of linearity are marked 'yes' in column four. As our results will reveal, the task bias indeed influenced the younger subjects.

4.2 *Experimental Results*

The data reported here is concerned with the scope-differentiated interpretations of the subjects. Responses that cannot be classified as corresponding to the wide scope of one of the QNPs are excluded from our analysis.[12] Corresponding to each sentence type and quantifier order, three categories of responses are distinguished. One type of response shows subjects consistently assigning wide scope to QNP_1 on the two test sentences (cf.the two prop arrangements). Another type of response shows subjects who consistently take QNP_2 as the wide scope quantifier on the two test sentences. In the third type of response, subjects fluctuate between the wide scope of QNP_1 on one test sentence and the wide scope of QNP_2 on the other. That is, the third category consists of inconsistent responses.

4.2.1 *Results on zai-sentences* (Type I)

Figure 8 gives the results on the *zai*-sentences with EA order. The lines connected by squares represent the percentage of an age group that consistently chose the wide scope of QNP_1 (in this case the existential quantifier). The graph marked by crosses represents the percentage of an age group that consistently violated the linearity principle by choosing the wide scope reading of QNP_2 (in this case the universal quantifier). The lines joined by diamonds show the proportion of an age group that varied between the two scope interpretations. Here, a wide scope interpretation of E is one where all the strings/towels are placed on a single stool/doll. A wide scope interpretation of the universal quantifier is one where each of the strings/towels is placed on a different stool/doll.

With respect to the adult subjects, it is clear that the majority of them (70%) consistently assigned wide scope to E in accordance with the linearity principle. A small percentage (5%) consistently interpreted the universal quantifier as wide scope, violating linearity.

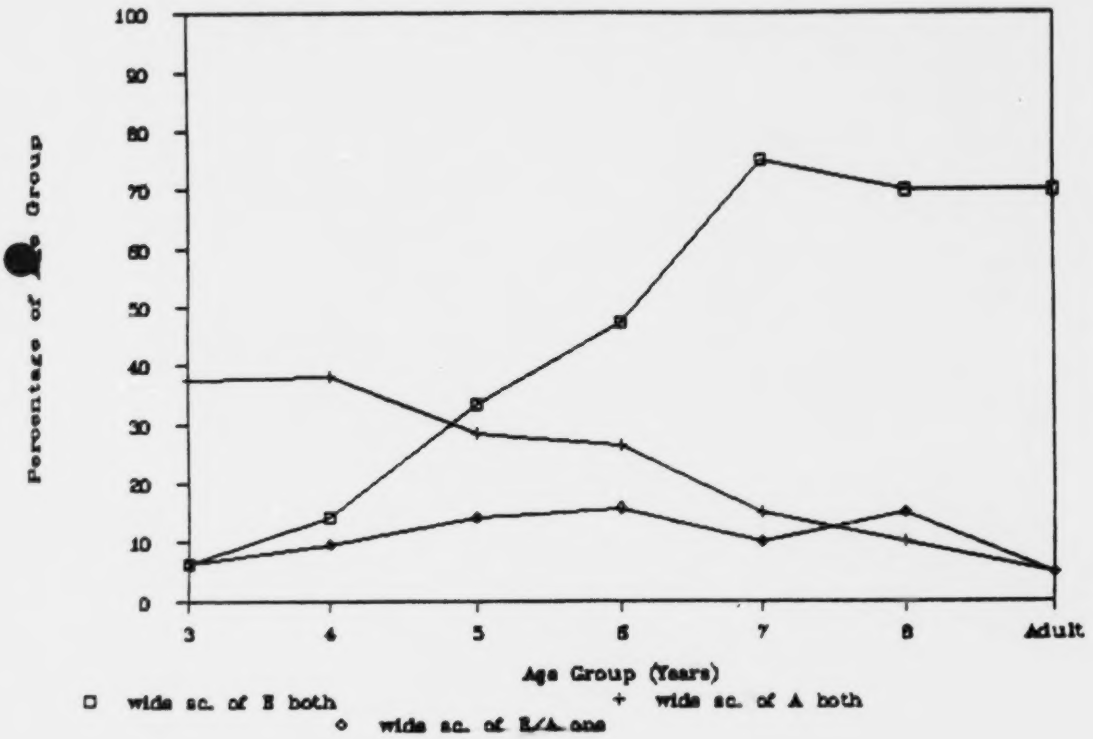

Figure 8. Children's Interpretation of *zai*-sentences
Existential Quantifier (E) precedes Universal Quantifier (A)
Type I: NP [zai $\underset{E}{\text{QNP}_1}$] V $\underset{A}{\text{QNP}_2}$

Another five percent gave inconsistent responses.[13] The reason why the adults did not show a higher level of uniformity as one would expect may be related to a lexical idiosyncracy of *mei* 'every': quantification of postverbal theme/patient objects by *mei* often results in unnatural sentences (see Xu and Lee 1989 for discussion).

The responses of the children subjects display a clear pattern. The percentage of three- and four-year-olds who assigned wide scope to E was very low (6% and 14% respectively). However, this percentage increased steadily with age to a peak of 75% at age seven. The initially low level of correct responses may have been due to the task bias discussed above, which gradually became overridden by the linguistic principles of scope interpretation. Turning to the subjects who consistently violated linearity, 38% of the three- and four-year-olds assigned wide scope to the universal quantifier. The figure declined steadily after five to a low of 10% at age eight. Later discussion will show that the apparent violation of linearity in the younger age groups was due to the task bias, which exerted a noticeable influence when the linearity principle had not been firmly established. It is worthy of note that the children were generally consistent in their performance: the inconsistent responses never accounted for more than 16% of an age group.

The results on the *zai*-sentences with AE order are presented in Figure 9. As in Figure 8, the lines marked with squares indicate the percentage of an age group that opted for the wide scope of QNP$_1$ (in this case A) reading on both test sentences. The graph with crosses represents the percentage of an age group that chose the wide scope of QNP$_2$ (in this case E) on both sentences. A wide scope of A response is one where the strings/towels are each placed on a different stool/doll. A wide scope of E response is one where a single string/towel is lain across all three stools/dolls.

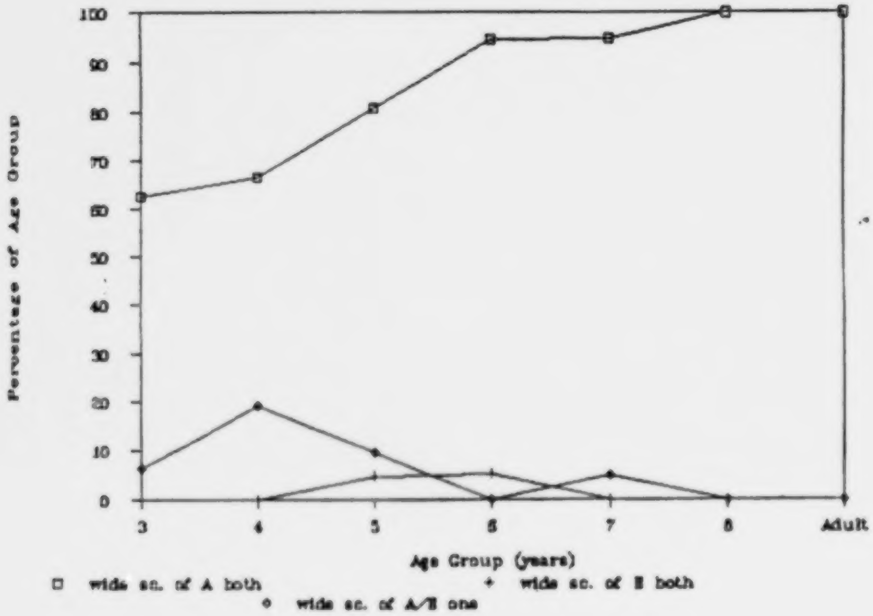

Figure 9. Children's Interpretation of *zai*-sentences
Universal Quantifier (A) precedes Existential Quantifier (E)
Type I: NP [zai $\underset{A}{\mathrm{QNP}_1}$] V $\underset{E}{\mathrm{QNP}_2}$

If the children were acting exclusively according to linguistic principles, the pattern of responses in the two figures should be highly similar, since the only difference between the test sentences lies in quantifier order. That is to say, one would expect the wide scope of QNP$_1$ reading to show similar paths of development in the two figures. However, the patterns revealed in the figures are strikingly different. First, with respect to the adult subjects, all of them consistently assigned wide scope to the universal quantifier in accordance with linearity. The unanimous adult response may be due to the fact that in the *zai*-sentences with AE order, the universal quantifier *mei* 'every' no longer quantifies a postverbal patient/theme object, but rather quantifies a locative phrase. The test sentences are therefore perfectly natural.

In contrast to the data on *zai*-sentences with EA order, the wide scope of QNP_1 response is evidenced fairly early in the *zai*-sentences with AE order. 63% of the three-year-olds and 67% of the four-year-olds gave this response. The figure climbed to 81% by five and 95% by age six. The surprisingly early onset of the wide scope of QNP_1 reading consistent with linearity and the relatively higher percentage of this response across all age groups may be attributed to the task bias.

Also different from the patterns of the *zai*-sentences with EA order, where some of the children (between 10% and 38%) across all ages chose the wide scope of QNP_2 reading in apparent violation of linearity (see Figure 8), extremely few children chose the wide scope of QNP_2 reading in the *zai*-sentences with AE order. None of the three-, four-, seven- and eight-year-olds showed this response, and only 5% of the five- and six-year-olds offered this interpretation. This suggests that when a violation of the linearity principle was not favored by the task bias, virtually no consistent violations of linearity could be observed.

Figure 9 also indicates that as in Figure 8, the percentage of children showing inconsistent responses on *zai*-sentences with AE order was small. Except for the four-year-olds, less than 10% of the age groups showed inconsistent interpretations.

In order to ascertain whether the younger children were acting according to linguistic principles or were mainly influenced by experimental setting, it was decided to compare the children's responses on the EA sentences with their responses on the corresponding AE sentences which involve the same props. The comparison should inform us as to whether children were sensitive to the distinction between EA and AE ordering. Tables 2 and 3 below provide information about four categories of responses for subjects who showed scope-differentiated responses. In both tables, column three gives the number of subjects who consistently followed the linearity principle, assigning QNP_1 wide scope regardless of whether it is an existential or universal quantifier. Column four shows the number of subjects who consistently violated the linearity principle by assigning QNP_2 wide scope irrespective of quantifier type. The last two columns show the numbers of subjects who assigned wide scope to particular quantifiers irrespective of quantifier position. Column five gives the figures for those who indiscriminately assigned wide scope to the universal quantifier, while column six gives the figures for those who indiscriminately interpreted the existential quantifier as having wide scope.

As can be seen from the figures in the third column of the two tables, less than 10 subjects (i.e less than 50%) among the three- to five-year-olds consistently used the linearity principle when presented with a particular set of props and different quantifier orders. The relevant figure, however, climbed steadily to between 14 and 18 subjects among the seven- and eight-year-olds. Note that the number of subjects who consistently violated the linearity principle (cf. column Four) never exceeded 3 among the three- and four-year-olds, and was nil in the other age groups. This argues convincingly for the growth of linearity as a scope principle for the children subjects.

Table 2. Children's interpretation of *zai*-sentences
EA order vs AE order
(Prop Setting A: strings and stools)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	10	2	0	8	0
4	17	7	0	10	0
5	18	9	1	8	0
6	18	12	0	6	0
7	20	16	0	4	0
8	19	14	0	5	0
Adult	18	17	0	1	0

Table 3. Children's interpretation of *zai*-sentences
EA order vs AE order
(Prop Setting B: towels and dolls)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	9	0	0	8	1
4	14	2	3	9	0
5	17	8	1	7	1
6	17	10	0	7	0
7	19	15	0	4	1
8	20	18	0	2	0
Adult	18	16	0	2	0

At the same time, between 7 and 10 (cf. column Five) of the three- to five-year-olds assigned wide scope to the universal quantifier irrespective of quantifier order. The number of subjects exhibiting this tendency dropped to 5 or less in the seven- and eight-year-olds. Note, however, that the figures in column Six show that virtually no subject indiscriminately assigned wide scope to the existential quantifier irrespective of quantifier position. The data thus strongly supports the existence of a task bias which favors a one-one correspondence of props, which must be taken into consideration in our analysis.

4.2.2 *Results on V-sentences* (Type II)

The data on the subjects' interpretation of the relative scope of two postverbal QNPs are given in Figures 10 and 11.

Figure 10 reports on the test sentences with EA order. First of all, examining the adult data, one notices that the percentage of adults who consistently assigned wide scope to QNP_1 (=E) was only 55%, while the percentage of adults assigning wide scope to QNP_2 (=A) was 25%, with another 15% varying between the two readings. This suggests that adults found these sentences scope-ambiguous.

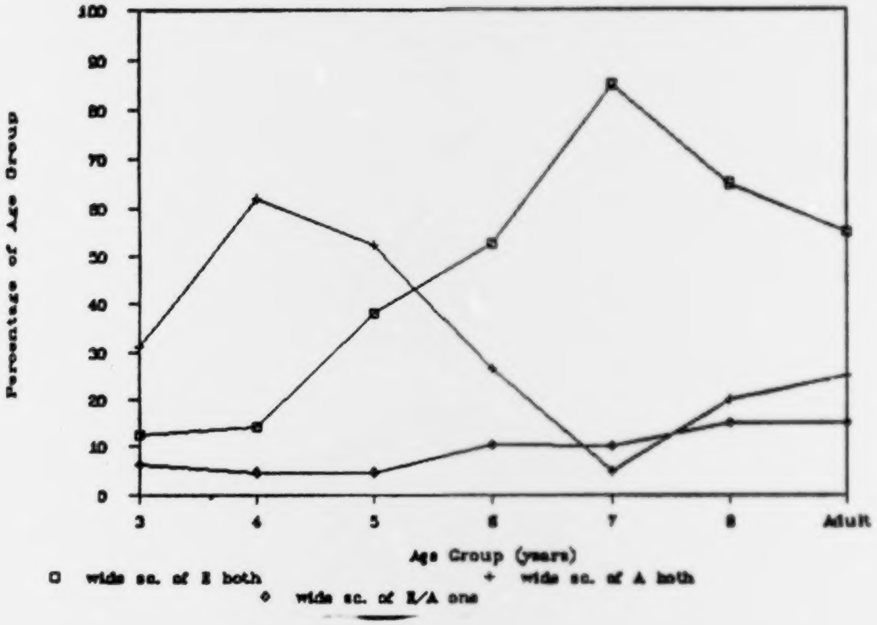

Figure 10. Children's interpretation of V-sentences.
Existential Quantifier (E) precedes Universal Quantifier (A).
Type II: NP V $\underset{E}{QNP_1}$ [P $\underset{A}{QNP_2}$]

Turning to the children's performance, we see that as with the *zai*-sentences, the percentage of three- and four-year-olds who took QNP_1 as the wide scope quantifier was very low (13% and 14% respectively). The figure for this response climbed to 38% at age five, and reached a peak of 85% at seven. There is good evidence to believe that the initially low figure had to do with the task bias. As the children matured, the linearity principle became gradually established, thereby strengthening the wide scope of QNP_1 reading. It is interesting to observe that unlike the results in the *zai*-EA sentences, the linearity-based reading for the V-sentences with EA order dropped after seven years of age to 65% at eight. This suggests that linearity is counterbalanced by some other scope principle in the older age groups.

As for the percentage of subjects consistently choosing QNP_2 as having wide scope, the figure stood at 31% at age three, increased to 62% among the four-year-olds, and then steadily declined to a low of 5% at age seven. Thereafter, the figure rebounded to 20% in the eight-year-old group. Again, the general decline in this type of response (except for a slight increase in the four-year-olds) alongside the growth of the linearity principle parallels what we observed in the *zai*-EA sentences. Evidently, the task bias exerted its influence mainly in the younger age groups. The slight rise in the wide scope of QNP$_2$ (=A) reading among the eight-year-olds, which happened concurrently with the drop in the linearity-based reading, is another indication of the ambiguity of this type of sentence. With regard to the third type of response, a very low level of inconsistency (between 5% and 15%) can be observed, corroborating the finding on *zai*-EA sentences.

The adult data for the V-sentences with AE order, given in Figure 11, show considerable similarity to the corresponding data in the V-sentences with EA order (refer to Figure 10 above). 30% of the subjects consistently selected the wide scope of QNP$_1$ interpretation in accordance with linear precedence. 25% of them consistently assigned wide scope to QNP$_2$ (=E), and 40% of them vacillated between the two readings. This confirms the ambiguity status of the sentences. It should also be observed that unlike the V-sentences with EA order, the V-sentences with AE order involve a lexical idiosyncracy of *mei* 'every' discussed earlier, since it quantifies a postverbal patient/theme object in these sentences. As a result, the V-sentences with AE order sound unnatural to native speakers of Mandarin.[14]

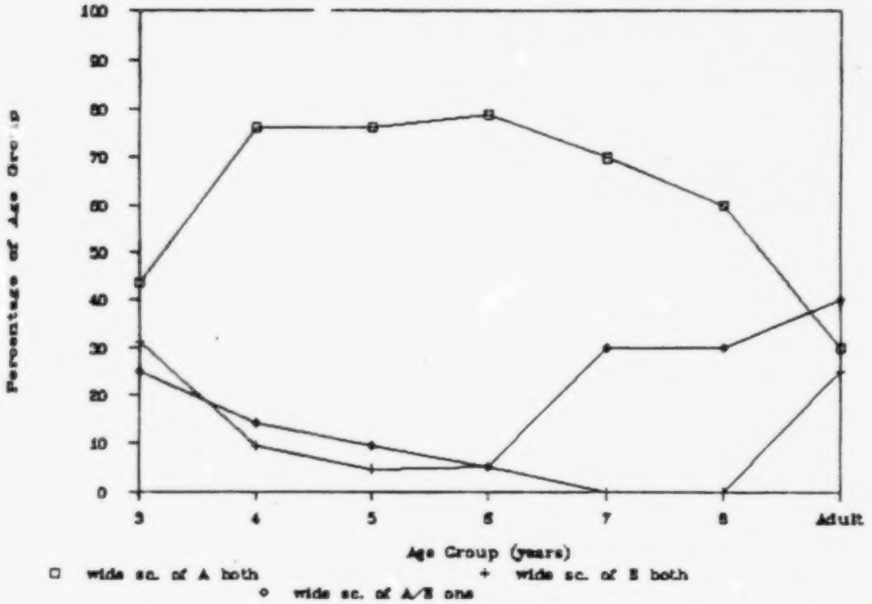

Figure 11. Children's interpretation of V-sentences.
Universal Quantifier (A) precedes Existential Quantifier (E).
Type II: NP V QNP$_1$[P QNP$_2$]
A E

Just as the children's data on EA and AE orders for the *zai*-sentences show divergent patterns, so the developmental findings on V-sentences with AE order, given in Figure 11, do not replicate those with EA order (cf. Figure 10). First of all, a relatively higher percentage of the younger age groups chose the wide scope interpretation of QNP_1 on the AE order than on the EA order. 44% of the three-year-olds selected this reading. The value increased to 76% at age five and stayed at that level until six years of age, then dropping to 60% among the eight-year-olds. Parallel to a similar decline after seven in Figure 10, a decline in the wide scope of QNP_1 reading after six was observed, presumably due to the emergence of ambiguity of these sentences for the children. Secondly, a small number (30%) of children opted for the wide scope of QNP_2 (=E) at the three-year-old level, but the value dropped sharply to 5% in the five- and six-year-olds, and 0% after six. This suggests that whatever the principle is that contributes to the wide scope reading of QNP_2, it does not seem to be sufficiently strongly established in the older age groups to allow them to go against the task bias, which favors the wide scope of QNP_1 reading in this case. Thirdly, with respect to the inconsistent responses, a fairly high level of the three-, four-, seven- and eight-year-olds (between 14% and 30%) assigned wide scope to QNP_1 on one sentence and to QNP_2 on another. This relative high level of inconsistency, especially among the older age groups, may be an indirect reflection of the scope ambiguity of the sentences. It may also be due to the violation of the lexical properties of *mei* 'every', which prohibits quantification of postverbal theme/patient objects.

To determine whether subjects were sensitive to quantifier order for the V-sentences, comparisons of subjects' responses on AE and EA sentences were made for each prop setting. These are shown in Tables 4 and 5 below.

Table 4. Children's interpretation of V- sentences
EA order vs AE order
(Prop Setting A: strings and stools)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	8	1	0	7	0
4	19	4	0	15	0
5	20	7	0	11	2
6	18	8	0	7	3
7	20	18	1	0	1
8	20	14	1	3	2
Adult	18	4	3	4	7

Column three of the two tables show that only 1 three-year-old, 4 three-year-olds and 7 five-year-olds assigned wide scope to QNP_1 irrespective of quantifier type. This figure increased to a peak of 14-18 among the seven-year-olds, followed by a slight drop after seven. The pattern is similar to that we found for the *zai*-sentences, showing children did not successfully apply linear precedence as a consistent

Table 5. Children's interpretation of V-sentences
EA order vs AE order
(Prop Setting B: towels and dolls)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	5	1	0	4	0
4	15	4	0	11	0
5	19	7	1	10	1
6	16	9	0	6	1
7	20	14	1	2	3
8	18	10	1	5	2
Adult	20	8	3	4	5

principle until after six. Column five of the two tables indicate that between 4 and 15 of the three-, four-, and five-year-olds assigned wide scope to the universal quantifier irrespective of quantifier order, pointing to the influence of the prop arrangement. The number of subjects showing this type of response dropped after six years of age to 7 or less, demonstrating clearly that the task bias was overridden by linguistic principles beyond a certain point of development. A glance at column four shows that virtually no subject consistently violated the linearity principle across all age groups.

4.2.3 *Results on Ba-sentences* (Type III)

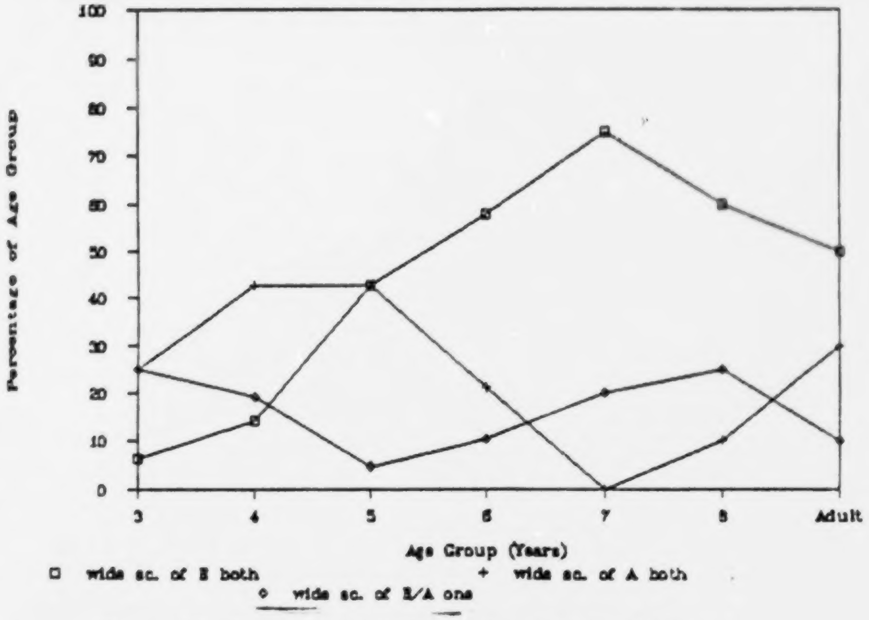

Figure 12. Children's interpretation of *Ba*-sentences.
Existential Quantifier (E) precedes Universal Quantifier (A).
Type III: NP [*BA* $\underset{E}{\mathrm{QNP}_1}$] V [P $\underset{A}{\mathrm{QNP}_2}$]

The results on the *Ba*-sentences with EA order, given in Figure 12, resemble those on EA order for the other two sentence types. The adult responses suggest that the construction may be scope ambiguous, since 50% of them consistently treated QNP_1 (=E) as having wide scope, while 30% of them consistently assigned QNP_2 (=A) wide scope, and 10% varied between the two readings.

The children's responses on *Ba*-sentences with EA order show a very low percentage of three-year-olds (6%) assigning wide scope to QNP_1. The figure grew steadily to 44% by age five and peaked at seven at 75%. The slight drop (to 60%) among the eight-year-olds may be an indication of the scope ambiguity of the *Ba*-construction. The proportion of subjects who consistently violated the linearity principle, presumably under the influence of the prop setting, was 25% at age three, increasing to a plateau of 43% among the four- and five-year-olds. This figure then dropped to zero at age seven, followed by a slight rise among the eight-year-olds. The increase in wide scope of QNP_2 in the eight-year-olds, which was also observed in the V-sentences with EA order (cf. Figure 10), suggests the realization of the scope ambiguity of *Ba*-sentences. Compared to the level of inconsistent readings in Figure 8 and Figure 10, the percentage of subjects that vacillated between the two readings was relatively high across the age groups: with the exception of the five-year-olds, between 10% and 25% of subjects chose QNP_1 as the wide scope quantifier on one sentence and QNP_2 on the other.

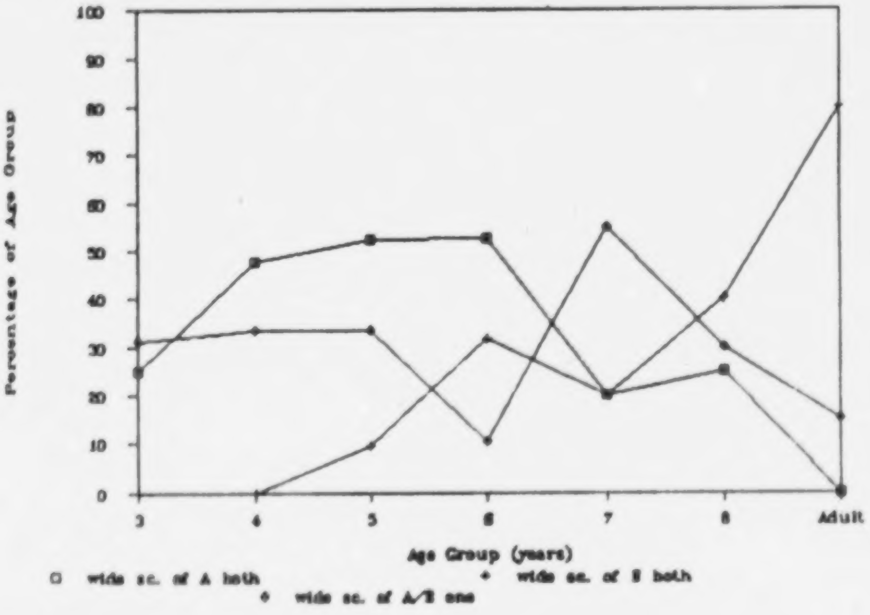

Figure 13. Children's interpretation of *Ba*-sentences.
Universal Quantifier (=A) precedes Existential Quantifier (=E).
Type III: NP [*Ba* QNP_1] V [P QNP_2]
A E

The results on the *Ba*-sentences with AE order, given in Figure 13, differ not only from the data on *Ba*-sentences with EA order, but also from the *zai*-sentences and V-sentences with AE order (cf. Figures 9 and 11). The adult data below indicate that 80% of them interpreted QNP_2 (=E) as having wide scope, none assigned wide scope to QNP_1 (=A), and 15% varied between the two scope possibilities.

If we trace the development of the wide scope reading of QNP_1, 25% of the three-year-olds selected this interpretation. The figure rose to around 50% at ages five and six, then declined to 20%-25% among the seven- and eight-year-olds. The overall developmental pattern for these sentences is similar to that for the wide scope of QNP_1 reading in the V-sentences with AE order (cf. Figure 11), except that the percentages are generally lower in the *Ba*-sentences. What distinguishes the *Ba*-sentences from the V-sentences lies in the development of the wide scope interpretation of QNP_2 with age in the *Ba*-sentences with AE order. In contrast to the other sentence types, none of the three- and four-year-olds opted for the wide scope of QNP_2 here, apparently due to the task bias. Around 10% of the five-year-olds showed this response, which increased to 32% by six years of age, dropped slightly and rebounded to 40% at age eight. This developmental path differed considerably from that of the *zai*- and V-sentences. Instead of either a low level or a general decline of wide scope of QNP_2 responses, this type of response in fact grew continually in the *Ba*-sentences with AE order, suggesting an increase in violation of the linearity principle with age. A third difference between the *Ba*-sentences and the other two sentence types lies in the unusually high level of inconsistencies in the children's responses. With the exception of the six-year-olds, between 30 and 35% of the subjects assigned wide scope to different QNPs on the two test sentences.

To determine the extent to which children relied on linguistic principles in their responses, their performance on the EA and AE sentences in the same prop setting was examined. These findings are listed in Tables 6 and 7.

Table 6. Children's interpretation of *Ba*-sentences
EA order vs AE order
(Prop Setting A: strings and stools)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	8	2	1	5	0
4	16	3	5	8	0
5	19	7	2	8	2
6	17	6	1	5	5
7	19	7	0	2	10
8	18	7	2	2	7
Adult	18	1	9	0	8

Table 7. Children's interpretation of *Ba*-sentences
EA order vs AE order
(Prop Setting B: towels and dolls)

Age (yr)	No.of subjects	wide sc. of E on EA wide sc. of A on AE	wide sc. of A on EA wide sc. of E on AE	wide sc. of A on EA wide sc. of A on AE	wide sc. of E on EA wide sc. of E on AE
3	11	2	0	6	3
4	17	6	0	10	1
5	20	5	1	9	5
6	18	7	0	4	7
7	19	8	1	1	9
8	20	5	4	2	9
Adult	19	0	5	2	12

Column three of the tables shows that relatively few subjects consistently followed the linearity principle: only 2 two-year-olds and less than 8 subjects of the other age groups consistently assigned wide scope to QNP_1. In contrast to what we observed in the *zai*-sentences and the V-sentences, no noticeable growth in the linearity principle can be observed in the *Ba*-sentences.

Two other tendencies in the data are worth noting. One is that the three- to five-year-olds had a tendency to assign wide scope to the universal quantifier regardless of quantifier position (cf. column five of the tables). Another tendency, which has hitherto been absent from the data on the other sentence types, is that the six-, seven, and eight-year-olds had a tendency to assign wide scope to the existential quantifier, regardless of quantifier position (cf. column six of the two tables). Why is there such a tendency unique to the *Ba*-construction? The answer may lie in one of the salient properties of the construction (cf. Note 9), i.e. the *Ba*-object is generally understood to be definite or specific (cf. Ding 1962, Li and Thompson 1981). Assuming that this property of the *Ba*-construction is acquired at some point, subjects who have grasped this property will give what might seem to be a wide scope of E on EA sentences, since the *Ba* object for these sentences is E. Likewise, on AE sentences, they will regard the universal quantifier functioning as the *Ba*-object as referring to a group of entities. This set will not be distributed, and as a result the response is in fact a group reading associating a set of three objects with another object. Such a reading superficially is no different from a wide scope of QNP_2 (=E) reading.

5. *Discussion*

Our data demonstrates that linear order is a strong scope interpretation principle for Chinese, and that it is firmly acquired at around age seven. This can be seen from the similarities shared by the developmental patterns of the EA sentences across the three sentence types. Comparing the graphs of Figures 8, 10, and 12, one observes that in all three figures, the percentage of an age group that selected the consistent wide scope reading of QNP_1 (=E) began at around 10% at age three, climbed to approximately 40% at five, and peaked at 70-80% by seven years of age. Concurrent with the gradual strengthening of linearity, one also observes a decline in the consistent wide scope reading of QNP_2 between five and seven years of age. The subjects' acquisition of the linearity principle is also reflected in their differential responses to sentences with EA and AE orders. In all three sentence types (cf. Tables 2 through 7), sensitivity to quantifier order was recorded after five, and the adoption of the linear precedence principle was evidenced with respect to the *zai*- and V-sentences.

The differences between the sentence types point to the presence of scope ambiguity in the V-sentences and possibly the *Ba*-sentences as well. With respect to the EA order, one difference between the V- and *Ba*-sentences on the one hand (cf. Figures 10 and 12) and the *zai*-sentences on the other (cf. Figure 8) is that the wide scope interpretation of QNP_1 showed a marked decline in the former sentence types after age seven, but not in the latter. Parallel to this difference is the slight rise in the wide scope reading of QNP_2 after seven, in the V- and *Ba*-sentences but not in the *zai*-sentences. The presence of scope ambiguity can also be seen from the divergences among the AE sentences. While the consistent wide scope reading of QNP_1 (=A) showed a steady increase in the *zai*-sentences (cf. Figure 9), that of the V- and *Ba*-sentences (cf. Figures 11 and 13) indicated a steady decline after four. The decline of the wide scope of QNP_1 reading in a prop setting that favored such a reading is another indication of the availability of scope ambiguity.

Why is there ambiguity in the V- and *Ba*-sentences and not in the *zai*-sentences? It has been proposed by (Xu and Lee 1989) that scope ambiguity in Chinese is restricted to the verb phrase, and stems from the joint effects of the linearity principle and a thematic hierarchy given below:

Thematic Hierarchy
(Group A): Agent, Location, Source, Goal
(Group B): Theme, Patient, Factitive (Narrow Scope Thematic Roles)

The thematic roles in Group A are higher on the hierarchy than those in Group B as far as scope is concerned. In general, if a QNP bears a thematic role which is higher on the thematic hierarchy than another QNP within the same VP, then the former may have scope over the latter. In the *zai*-sentences, QNP_1 precedes QNP_2 and should therefore have scope over the latter by the linearity principle. At the same time, QNP_1 bears a location thematic role, which takes priority over the theme/patient role borne by QNP_2 according to the thematic hierarchy. Therefore by both principles, QNP_1 should take wide scope, and the sentence is unambiguous. In the V-sentences, QNP_1 should likewise have wide scope by the linearity principle. However, QNP_2 bears the location role, which is higher on the thematic hierarchy than the theme/patient role carried by QNP_1. The conflicting demands of the two scope interpretation principles give rise to ambiguity. This analysis of the V-sentences should extend to the *Ba*-sentences, though there may be construction-specific effects unique to the *Ba*-sentences in view of the sharp rise of the wide scope of QNP_2 (=E) reading in the AE sentences (cf. Figure 13).

6. *Conclusions*

Assuming the relevance of the linear precedence to the scope interpretation of adult Mandarin, we set out to investigate the development of this principle in Mandarin-speaking children, with a view to providing a basis for further study of parametric variation. Three kinds of sentences were examined all of which contained mutually commanding QNPs that do not c-command each other. The three sentence types also differed with respect to the possibility of scope ambiguity.

The findings reveal that quantifier order is distinguished by Chinese children by six and that the linearity principle for scope interpretation is firmly established by seven. There is also evidence to suggest that if scope ambiguity is entirely due to the operation of the thematic hierarchy, the latter scope interpretation principle is acquired late, probably after seven. The data on *Ba*-sentences also indicate that construction-specific effects related to definiteness may affect subjects' judgment of quantifier scope.

Notes

*I wish to express sincere gratitude to Chen Ping, Lin Chongde, Xie Jun, Xiong Zhenghui, without whose assistance the experiments could not have been conducted. Earlier versions of this paper have been presented at UC Irvine and the International Conference on Syntactic Acquisition in the Chinese Context held on July 4-6 at the Chinese University of Hong Kong. I am indebted to Yu-Chin Chien, Nina Hyams, Xu Liejiong and Ken Wexler for comments on various points in the paper. This research was supported in part by the Hsin Chong-K.N. Godfrey Yeh Educational Fund.

[1] The relative scope property is of course not restricted to QNPs. Other quantificational elements such as negators, adverbs and modals also display relative scope. This study focuses on the relative scope of QNPs.

[2] An example of a well-formedness condition on the binding of variables is that operators must bind variables. Thus a representation with operators not associated with any variables will be ill-formed and uninterpretable, e.g. "There is a x=person such that John saw Mary".

[3] Quine (1973) suggests that variable-binding may be learned

inductively from wh-questions. For example, children may observe the interchangeability of *who* and *the teacher* in exchanges like the following:

A: John is *the teacher*
B: *Who* is John? (For which x=person, x is John)

Since wh-questions involve the binding of variables by wh-operators, substitutional contexts such as the one above may be a source of the child's knowledge of variables. Our objection to Quine's analysis is twofold. On theoretical grounds, it seems that even if children manage to learn that interrogative pronouns can be interpreted as bound variables, how do they generalize this knowledge to QNPs? In addition, how are children able to learn well-formedness conditions such as that illustrated in Note 2? If well-formedness constraints are biological givens, then the notion of variable binding must also be innately given, since the constraints are stated in terms of operators and variables. On empirical grounds, too, as our data will reveal, it is doubtful whether the learning of wh-bound variables can be extended in a straightforward way to the variable binding of QNPs. The literature shows clearly that canonical *who- what- where*-questions are understood by four at least in some verbal contexts (cf. e.g. Brown 1968, Cairns and Hsu 1978, Tyack and Ingram 1977). If this can be taken as an indication of acquisition of bound variables (see Roeper 1986 for an alternative view), then the acquisition of the variable-binding property of QNPs may be very different from that of wh-questions, since the data available suggests that knowledge of the former is not clearly evidenced until after five (cf. Lee 1986).

[4] This position is adopted by Hornstein (1984), though he further assumes that the variable binding property may actually surface quite early.

[5] Aoun and Li (1987) have drawn attention to the fact that the English Double Object construction with QNPs as direct and indirect objects is scope unambiguous. For example, the sentence below cannot have the wide scope reading of QNP_2.

I gave a man every book.

The sentence cannot be understood as "For all y=book, there is a x=man such that I gave x y". Xu and Lee (1989) cite data such as the following which shows that the wide scope reading of QNP_2 in this kind of sentence may not be absolutely prohibited:

I sent an applicant every one of the department's brochures.

[6] S-structure and Logical Form refer to the levels of syntax standardly assumed in the Government Binding theory (cf. Chomsky 1981, van Riemsdijk and Williams 1986). For the purpose of our discussion, Logical Form can be broadly understood to be a level of representation one of whose identifying properties is that scope ambiguity is primarily represented structurally at that level (cf. May 1977, 1986).

[7] Alternatively, one could treat the preverbal PPs as merely superficial and analyze them as being on a par with NPs. Once this assumption is made, QNP_1 will c-command QNP_2. Acceptance

of this line of analysis will mean that it would be virtually impossible to find unequivocal cases of mutually commanding QNPs that do not show any c-commanding relationship.

[8] An alternative analysis of the *Ba*-construction in which the *Ba*-phrase is positioned as a sister to the verb may be proposed. This alternative is supported by the fact that not all verbs can appear in the *Ba* construction (e.g. stative verbs such as *zhidao* 'know' or *renwei* 'regard'), and clearly verbs need to subcategorize for this type of structure. The alternative analysis will not affect the relevance of the *Ba*-sentence to our experimental study.

[9] The *Ba*-construction can be seen as a structure allowing postverbal objects to be fronted to preverbal position following the subject. The scope properties of *Ba*-sentences are not well understood, though the adult control data of this study will provide some evidence for generalization. One of the salient properties of the *Ba*-construction is the requirement that the *Ba*-object be definite or specific. This seems to rule out at first sight the possibility of QNP_2 taking wide scope over QNP_1 (i.e. the *Ba*-object). We will return to this point in later sections.

[10] The experiment also tested the quantifier order in which an existential QNP precedes another existential QNP (EE order). The data on EE order will not be discussed in this paper, since these test sentences involve other quantificational properties in addition to relative scope, e.g. the tendency for universal generalization.

a. [yige laoshi jiao yige xuesheng] tai hao le
one-CL teacher teach one-CL student very good PRT
"It is fantastic that each teacher teaches one student"

b. (the fact) that for all x = teacher, there is a y = student
such that x teaches y is fantastic.

[11] An interesting fact reported in Donaldson and McGarrigle (1974) is that sentences such as "All the cars are in the garages" were judged true by their children subjects only if each garage was occupied by a car. Likewise, sentences such as "All the books are in the boxes" were judged true only if the numbers of books and boxes were equal. They suggest that "for children under five, there is something peculiarly fundamental and compelling about the notion of fullness."

[12] An example of a response from a subject which cannot be classified as a scope-differentiated response is one where the subject placed only one of the objects (strings or towels) on another object (stool/doll) for the AE sentences. Similar non-scope responses were also observed among the younger subjects in Lee (1986).

[13] For some reason, 20% of the subjects gave at least one non-scope interpretation. This may be related to the fact that the sentence type violated lexical restrictions on the universal quantifier *mei* 'every'. Some adult subjects in fact reported that they found this sentence type very odd.

[14] An additional phrase structure constraint needs to be noted. It has been pointed out by Chen (1987) that generally in sentences of the form:

$X\ V\ NP_1\ [\textit{zai}\ NP_2]$

the NP_1 cannot be definite, as seen in the ill-formedness of

Fang neiben shu zai zhuo shang
put that-CL book at table on
"Put that book on (the) table"

The oddness of the V-sentences with AE order may also be related to the fact that universal quantifiers generally pattern with definite NPs, thus leading to violation of this phrase structure constraint.

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Some Neglected Syntactic Phenomena in Near-Standard English

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INTRODUCTION

The purpose of this paper is to draw attention to a number of syntactic phenomena in modern English (more specifically, but not exclusively, in varieties of modern British English, of the sort that might be roughly characterized as urban/suburban near-standard usage). These phenomena are representative of a type of feature which has to date received relatively little attention from linguists. Broadly speaking, three kinds of syntactic (and morphological) phenomenon seem to have attracted extensive discussion and study in recent accounts of modern English. Firstly, features of the standard variety, or rather of the several standard varieties, such as are analysed at length in reference grammars such as Quirk et al. (1972) - these works make only occasional references to phenomena 'on the fringe' of the standard variety or varieties in question, and, typically, none at all to features considered definitely 'non-standard'. Secondly, features of traditional 'broad' dialect speech, speakers of which are in general highly immobile socially and geographically, lacking in formal educational experience, and aged, and as a result largely isolated from mainstream developments in syntax as at other levels of their usage (studies of traditional dialect grammar, which were more common earlier in this century than at present, tend in fact to concentrate on morphology rather than syntax, but the point is made). And thirdly, features of 'new' varieties of English such as those used by (originally) immigrant communities in the U.K. (e.g. British Black English, see for instance Sutcliffe (1982)), those typical of urban Blacks and other ethnic minority communities in the U.S.A. (this goes back to Labov and earlier), creoles and near-creole varieties current in various parts of the Caribbean and elsewhere, and second-language varieties such as the English of Singapore and Malaysia (see for instance Tongue (1979), and some of the papers in Noss ed. (1983)).

Now there are many phenomena which do not fall into any of these three general categories, but which are nevertheless of very considerable interest both dialectologically and in sociolinguistic terms. One such group of phenomena consists of features current amongst lower-middle-class and more especially working-class speakers in towns (I shall restrict my comments here to features found in Britain (amongst other places), but there must be many such features in the speech of town-dwellers in other English-speaking areas). The speech of town-dwellers is mostly much more easily mutually intelligible with standard English-with-R.P./General American/ etc. than is that of rural dialect speakers or speakers of Black English and other such 'new' varieties, but it still differs from the relevant standards, statistically rather than categorically in some cases, in many interesting ways. Speakers of this sort are, of course, the kind whose speech urban sociolinguistic studies of the type pioneered by Labov have been designed to survey, but to date much more attention has been paid to the phonological patterns which emerge from these studies than to syntactic features, and our ignorance of the syntactic patterns within the usage of this large and important group of speakers is still profound.

Of course, there has been some attention paid to phenomena of this sort. Cheshire (1982) and the associated articles stemming from Cheshire (1979) contain a detailed sociolinguistic examination of several syntactic (and morphological) features of the speech of working-class teenagers in one particular British town, Reading. There are comments, often rather skimpy, on syntactic matters in most of the other well-known British sociolinguistic studies, such as Heath (1980), Knowles (1974), Petyt (1988), etc. North of the Border, where urban speech is perhaps more distinct, in general, from standard English, than in England, and where a distinctive standard variety also exists, there has been more extensive work of this sort, with more use of quantification (e.g. Miller & Brown (1982) and the earlier work cited therein). In so far as Scots, and, to a lesser extent, Welsh usage can be regarded as standard, they are also discussed, in rather general terms, in works such as Trudgill & Hannah (1982). Some very general remarks appear passim in Trudgill ed. (1984). And some attention has also been paid, indirectly, to this relatively neglected sort of usage , in studies, such as that reported in Trudgill (1983:8ff), of the ability of speakers of other varieties to interpret forms illustrating various geographically restricted phenomena. Nevertheless, this remains an area which cries out for more attention. Just how widespread, geographically and socially, are various non-standard syntactic constructions typical of near-standard urban or suburban speech? How far are they understood outside the circles/ areas where they are current? Where have they arisen from, and how? What does the synchronic and diachronic evidence suggest will be their fate in the decades to come? New studies, in various parts of the country and with various types of speaker, are needed if we are to answer such questions. What has happened to date has been limited largely to anecdotal observations.

Of course, it is not easy to study syntactic phenomena, particularly features considered to be non-standard. It is hard to elicit direct comments from naive informants, as they may not perceive the focus of the enquiry, and even if they do their responses are likely to be heavily influenced by folk-linguistic ideas about 'correctness', or to be too vague to be helpful. If one seeks to study constructions as they actually appear in usage, one must face the problem of collecting sufficient data to obtain statistically significant numbers of tokens of each relevant construction, which often involves the necessity of recording enormous amounts of talk. And the frequency levels one then obtains for non-standard variants of these constructions may still be very low, owing to the high level of stigmatisation of non-standard syntax, and, in particular, morphology, in English-speaking communities. Speakers whose usage is, in more familiar settings, extremely non-standard may in an interview shift to a much more standard pattern of usage - the effect here is more prominent than on phonological variables. Further, it is more or less impossible to include non-phonological variables in linguistic exercises such as reading passages. Nevertheless, it is possible to obtain some data of the kind required, and below I discuss a number of phenomena which occur in near-standard British speech and which seem worthy of attention.

(a) Non-restictive 'that'

The use of *that* as a relative pronoun in non-restrictive relative clauses. This is not apparently reported in traditional dialect studies, and appears to be an innovatory phenomenon, but is, as it seems, very widespread, being reported from various parts of the U.K. On this phenomenon as it applies in the U.K., see Newbrook fc; on Singapore, see Newbrook et al. 1987; on Hong Kong, see Newbrook 1988.

(b) Extended present perfective

The increasing use of the 'present perfective' form of verbs with a past-time adverbial (not including *before*, *already* etc. which involve implicit reference to current relevance and with which the usage is long established). This has been anecdotally referred to a number of times in the literature, notably in Hughes & Trudgill (1979:9) and Trudgill ed. (1978:13). In both cases, 1) below is cited as a typical example.

1) and Roberts has played for us last season

(said without any kind of pause after *us*). At an earlier date, this sort of construction would not have been heard - a simple past form *played* would have been used, or else the notion of current relevance expressed in one sentence and the time of the event referred to in another. Further instances are not hard to find. In a study of the English of West Wirral, in Merseyside/Cheshire, conducted in 1980 (see Newbrook 1982, 1986). I recorded:

2) we've done our V.A.T. return last weekend

(standard *we did*), and I myself once remarked, during a tutorial:

3) we've talked about that two weeks ago

(standard *we talked*). The feeling seems to be that this particular usage is increasingly widely heard nowadays, more especially with younger speakers. This latter may well be true - older colleagues (I was born in 1956) report that they would not use the form - but the important point, as Trudgill says, is that virtually nothing is in fact known about the distribution and origin of the construction. Neither do we know what constraints, if any, there are on this use of the form, or whether any such constraints which may exist are involved in any kind of implicational process by which it is being introduced.[1]

(c) Extended simple past

The reverse of this phenomenon - the use of the simple past form where standard English would have the 'present perfective' particualrly (but not exclusively) in conjunction with adverbials such as *just* which suggest the recent completion and hence current relevance) of an action. Examples from the West Wirral study are:

4) (we won't be going again soon,) seeing we just went

(*seeing* here is a non-standard/colloquial connective corresponding with standard English *as*, *since*, etc. - it appears also as *seeing as (how/though)*, *seen (as (how/though))*, with the same meaning)

5) we just had them (sc. examinations)

6) I never heard of it

(standard equivalents would be *...we've just been, we've just had them, I've never heard of it)*.

These (and other more marginal cases), recorded in West Wirral, were all produced by younger speakers, and my locally acquired intuitions are that this pattern is general in the area. I also feel that the usage is more common in the North of England than in the South, and perhaps more common in the North-West than, say, in Yorkshire, but these intuitions may well prove to be seriously wrong. Similar usage is common in North America, and the greater exposure of younger British people to spoken material originating there might perhaps account for the relatively recent rise of the form - but in that case regionalised distribution within Southern Britain, if genuine, would be hard to account for.

(d) 'Had've' etc.

The development of a new aspect/tense/mood-signifying periphrastic form of verbs, in *'d've* (or, under emphasis, *had've*, perhaps for some speakers only) plus non-finite *-ed* form. An example of this, produced by a colleague, is:

7) it would've hurt you if it had've fallen

Obviously, if 7), with emphasis on *had*, is found in any speaker's repertoire, it is likely that 8), lacking such emphasis, will be also:

8) it would've hurt you if it'd've fallen

but there seem to be some speakers who can produce 8) but not 7), or who accept 8) but not 7). For some speakers this form seems to be a variant on the more usual form used in the protases of conditionals of the kind conventionally described as 'remote past', which is formally identical with the ordinary past perfective form, e.g.:

9) it would've hurt you if it had/'d fallen

On this interpretation, whatever component of grammatical meaning is marked by the use of *had/'d* in 9) is redundantly marked again in 7) and 8) by the use of *'ve*. In this case (and perhaps regardless of interpretation), the historical origin of the construction seems fairly obvious. The apodoses of remote past conditionals, e.g. the first clause in 7) - 9), often contain verbs formed with *would have/would've/'d've* (*'d* is reduced *would* - see below on this use of *have/'ve*). A tendency has clearly developed of 'copying' this form analogically in the protases of such constructions, perhaps in order to increase the effect of parallelism between the remote condition and its equally unfulfilled result - one sees such forms as *if he would have done that,...* in some rather self-conscious formal writing, attesting to this tendency [2]. Such forms do sometimes occur in speech also. But the reduced form *'d 've* (or even, occasionally, *'d have*, especially after a vowel) is obviously preferred, in rapid speech, to *would have/ would've*, in apodoses of the relevant type; and it is thus this, rather than the fuller forms *would have/ would've* that is usually 'copied' into the protasis. Use of the reduced forms also makes it less clear that non-standard *would* is occurring here, and this may be, for some speakers who are uncertain as to the 'correct' usage, an additional reason for preferring them. But the use of reduced forms gives rise to a problem. *'d've* may sometimes have to be re-expanded for purposes of emphasis. *'d* is ambiguous in this respect between *would* and *had* (cf. 9) above), with *had* being overall the more common re-expansion. In this particular construction, re-expansion of the *'d* in the protasis to *had* is especially likely, because of the parallel with the standard form, in which *had/'d* does occur (as in 9)). A new 'modal' *had* has thus been analogically created (it is clearly different in distribution and meaning from the existing model *had* in *had to*, past of *have/has to* as in *she has to do it*).

Trudgill & Hannah (1982:47) point out that the fuller forms of these protases, with *would have*, are common in North American usage - and one feels sure that these forms are in general more widespread than it might at first seem [3].

In addition to those speakers for whom forms such as 7) and 8) are synonymous variants on 9), there appear, however, to be other speakers for whom this apparently new construction contrasts in meaning with all standard English conditional constructions, including those such as 9) (i.e. for whom 7) and 8) contrasts in meaning even with 9)). The colleague who produced 7) seems to be in this latter category of speaker. To see how this can be the case, we must first examine a strategy which is employed at various points in the English verb system in order to render past in sense a form which is already formally marked as past and so cannot be marked as past again in the normal way. The most obvious instance of this arises with the modals *could, would, should* and *might*. As most readers will be aware, these four forms pattern in some of their uses as the respective past tenses of *can*, *will*, *shall* and *may*, but in other uses they have independent meanings and do not have any kind of past time reference. Nevertheless, they continue, of course, to carry formal past tense marking (*-d* or *-t*), and, like *ought (to)* and *must*, which in fact behave similarly in respect of the present phenomenon, they cannot be marked again as past by the addition of a suffix, even in thier independent uses. An instance of these independent uses is provided by :

10) we should tell the police

which has present time reference and is in no sense functioning as the past tense equivalent of:

11) we shall tell the police

A problem arises, of course, if we do wish to use *should* (or any of the other modals involved in this issue) with past time reference, but still with its inherent meaning (*not* as the past of *shall*, etc.[4]) ; i.e. how do we produce the past tense equivalent of 10) and sentences like it? *should* is already formally marked as past, and there is no form **shoulded*. The device actually used is the creation of a 'pseudo-perfective' form which in fact is not (necessarily) perfective in meaning at all, but is simply the way in which these four modals, together with *ought (to)* and *must*, form their past tenses, being unable to do this in the usual way. The nearest past tense equivalent of 10) which uses *should* is thus:

12) we should have told the police

Admittedly, 12) inevitably carries an implication to the effect that 'we' did not in fact tell the police, and it is this which prevents 12) from being an exact past of 10) - however, I would argue that, as this is a function of the tense/time difference, 12)can for our purposes be treated as the past of 10). Evidence that this is simple past and not 'past perfective'/'past-in-past' may be found in the fact that sentences such as 12) take past time adverbials much more readily than do sentences such as 13) where the aspect is genuinely perfective (see b) above on this issue):

13) we have/had told the police

In particular, 12) can take an adverbial such as *last week*, just like any other sentence, whose tense is simple past - but 13) cannot, or cannot so readily[5].

The protases of remote past conditionals provide another situation where *have* must be used in this 'pseudo-perfective' way to render past in meaning a form which, formally speaking, is already marked, misleadingly, as past. In 9), although the verb is formally past perfective, the time reference is simply past - the element *had/'d*, which appears, formally, to mark perfective aspect, in fact marks the form as past tense, and the *-d* of *had/'d*, which appears to mark past tense, in fact marks the condition as remote. This occurs because the same form is used in English for fulfilled past events and remote (present) events - the 'simple past', e.g. *fell*. As a result, if one wishes to express the fact that a condition is both remote and past, it is necessary to mark it a second time as past a form which is already formally past. Compare 9) with 14) to 16):

14) it'll hurt you/ it hurts you if it falls (present/ future, non-remote)

15) it'd hurt you if it fell (present/future, remote (unlikely))

16) it hurt you if it fell (past, non-remote (fulfilled) habitual, etc.))

(In connection with the above examples, it should be noted that the notion of 'remote', as applied to present/future tense verbs, must, of course, be interpreted in a different way from that required for past tense verbs ('(relatively) unlikely', etc., as opposed to 'counterfactual'/ 'unfulfilled', etc.) This difference seems to me to be in large part a function of the tense difference, and I am here accepting the traditional term 'remote' to cover both types of case. These corresoponding present and past forms do seem to form a column in a matrix of verb-forms, opposed to equivalent 'non-remote' forms; furthermore, the semantic aspects of these oppositions seem to me to be sufficiently of a type to warrant the use of an umbrella term such as 'remote'.)

The protasis of 15) contains *fell* - already past in form but present/future in meaning, and past in form because it is also marked as remote. 15) and 16), with identical protases, are related to 14) on different dimensions. 9) is the combination of 15) and 16) - simultaneously past and remote. Like *should* in 12), it takes *have* (here *had*), not to become perfective, but to become past (cf 15).

It is, however, quite possible to produce a genuinely perfective equivalent of a sentence such as 16) (I ignore here present perfective forms, as they are not involved in this present issue). The resulting form here would be:

17) it had hurt you, if it had fallen

Sentences of this type are rare, and more plausible ones contain *must* or a parenthetical adverbial of surmise such as *then* in the apodosis. A more likely re-casting of 17) is:

18) it *must* have hurt you (,then), if it (really) had
(indeed) fallen (already)

The falling, and perhaps the hurting too, is here envisaged as occurring prior to the past-time reference point, and the idea is that if this falling had actually occurred, as, perhaps, is claimed elsewhere, the hurting too must have occurred. Now the protasis of a sentence like 17) is identical with the (full-stress form of the) protasis of a sentence like 9). (It seems to me that *'d* cannot occur for *had* in 17) since some stress must always be on this item in sentences of this type.) But 9) and 17) are related to 16) on different dimensions, as above in the case of 15), 16) and 14). 9) is the remote form of 16), whilst 17) is the (non-remote) perfective form of 16). That 17) and 9) are indeed quite distinct, as far as their protases are concerned, is confirmed by three considerations. Firstly, as remarked, it seems that *'d* can occur only in 9), not in 17). Secondly, the form of the verb in the apodosis is always different (unless we count archaic *must have hurt* in the sense of 'would surely have hurt', which at one time was heard in sentences such as 9)). Thirdly, and perhaps most importantly, there are alternative forms of the protases of 9) and similar sentences (and of 15 and similar sentences) which are not available in the cases of 17) (or 14) or 16)) - i.e. only the remote forms have these alternatives. The most usual alternative form of 9) involves inversion of the subject and the word *had* (here, of course, never *'d*, since it becomes clause-initial). E.g.:

19) had it fallen, it would've/'d've hurt you

(more usual order). There are further alternatives, with *should it have fallen, were it to have fallen*, etc. Equivalents of these exist for 15) (where there is no *had* in the protasis, ruling out any equivalent of 19)); e.g. *should it fall, were it to fall*. Forms of this sort are not found corresponding with 14), 16) or 17) - the non-remote forms. This fact clearly distinguishes 9) from 17), and 15) from 16).

However, it may sometimes be felt necessary to produce a form which differs in meaning from 9) in the same way that 17) differs from 16) - that is, by the addition of perfective aspect. Such a form will differ in meaning from 16) on both dimensions, remote/non-remote and simple/perfective, although sharing with it its past tense. That is to say, it will relate to 9), 17) and 16) in the same way that 9) itself relates to 15), 16) and 14); just as 9) is past and remote, sharing one feature with each of 15) (remote) and 16) (past), both of which are absent in 14), so this new form will be both perfective and remote, sharing the former feature with 17) and the latter with 9), and sharing its past tense with both of these and with 16). But the form of the verb in both 9) and 17) is already marked formally twice - as remote and past 9) or as past and perfective 17). The option which was available for creating 9), that of marking a second time, is not available here, because the forms are already marked a second time. The form thus has to be marked yet again - it is perhaps not surprising that it appears to be a relatively recent development, particularly with this meaning! There are two principal factors which would both seem to encourage the use of *have* after *had* as the necessary device here. Firstly, *had* is often phonologically identical with *would*, owing to being reduced to *'d*, and *would*, like *should* etc., freely takes *have* in this way (see 12) above). Secondly, forms such as 7) and 8), with *had have*, probably existed already, in the usage of speakers for whom they were/are synonymous with 9). Further encouragement must derive from the frequent presence of *would have* etc. in the apodoses of these constructions, and of *would/'d* in their present/future equivalents. Forms such as 7) and 8) result, marked as perfective twice. Once this (formally past) *had* as in 7) and 8),is identified as a modal, which it probably is both by speakers who treat 7) and 8) as synonymos with 9), and by this second group who do not, the use of *have* to render it past in meaning becomes an obvious tactic - it must seem closely parallel with *could*, *should* etc.

Speakers of this second type, then, interpret such as 7) and 8) as both past perfective and remote - that is 7) and 8) mean, for them, roughly: 'if it had fallen (already), prior to the past-time reference point, which it didn't, it would subsequently (at or before that reference point) have hurt you (but it didn't fall so it didn't hurt you)'. Although this reports a sequence of events which differs scarcely at all, in purely factual temrs, from that reported by 9), it contrasts grammatically with both 9) and 17), and combines their meanings just as 9) combines those of 15) and 16). If speakers of this kind really do make this sort of distinction, it should be difficult or impossible for them to use *'ve* in cases where the perfective element cannot be taken as present - e.g. where the events (or, better, states) described in the two clauses are strictly contemporaneous. This issue has not so far been tested.

At least some speakers of this type, including the colleague referred to, also use alternative forms of 7) and 8) parallel with 19) (alternative of 9)), e.g.:

20) had it've fallen, it would've/d've hurt you

I do not know whether speakers who treat 7) and 8) as synonymous with 9) ever produce forms like this, but they are frequent. I recently heard a BBC cricket commentator, a Yorkshireman, say on the radio:

21) had it've happened,...

This usage confirms, if confirmation were needed, the remote meaning of 7) and 8), as the inversion occurs only with remote forms, and its existence for some speakers serves to integrate further into the conditional system this new form with its apparently still newer meaning.

I conclude this discussion with a tabulation of the relationships between 7) and 8), 9), 14), 15), 16) and 17).

(i) 14), 15), 16), 9)

14)	Present/Future	Non-remote	Unmarked
15)	Present/Future	Remote	Marked past
16)	Past	Non-remote	Marked past
9)	Past	Remote	Marked past and perfective

(ii) 16), 9), 17), 7) and 8) (second type of speaker)

16)	Past	Non-remote	Simple	Marked past
9)	Past	Remote	Simple	Marked past and perfective
17)	Past	Non-remote	Perfective	Marked past and perfective
7), 8)	Past	Remote	Perfective	Marked past, perfective and extra *have* (pseudo-perfective)

Theoretical considerations of this kind are highly interesting, of course, but the fact remains that as far as is known all the evidence for the existence and meaning of forms such as 7) and 8) is anecdotal. The degree to which sentences such as these are used or accepted, in either interpretation, and their geographical and social distribution, remain most unclear [6].

(e) Lexical comparatives and related matter

Phenomena centring upon the words *different* and *than*. (On these see Newbrook & Yio 1987 on background and on the situation in Singapore - this study is very much the fullest available in this area, for any dialect, despite certain methodological and other constraints relating to the fact that it derives from an M.A. dissertation.) The adjective *different* is increasingly frequently intensified by *much* rather than *very*, the normal intensifier used with positive (i.e. formally non-comparative, non-superlative) adjectives in standard English. An example from West Wirral is provided by:

22) it sounds much different than it sounds here

In fact, in this particular study, *much different* was frequent, while no case of *very different* occurred in many hours of conversation. For many speakers in this area, *much different* seems to be categorically found here, and I have never heard anyone 'corrected' for using it. More generally, there is plenty of evidence of the prevalence of the form throughout the U.K. and elsewhere, and it has begun to appear in serious writing, including that of linguists. 23) below appears in Trudgill & Hannah 1982 (27):

23) Welsh English ... is not much different from that of England

Examples in journalistic writing are much more frequent still, and perhaps date from earlier. 24) below formed the headline to a sports article printed in a local Yorkshire newspaper in early 1975:

24) it's a much different Trinity now

('Trinity' refers to the playing squad of Wakefield Trinity Rugby League Football Club). More recently, and from a location which might be expected to be somewhat isolated from developments of this sort, comes:

25) it will not be much different from urban Hongkong

(referring to Shatin in Hong Kong's New Territories - the source was the Straits Times, Singapore's leading English-language newspaper, the date 31/3/83). Other examples can readily be found.

This last example includes the negative *not*, and in the presence of *not*, either immediately before the intensifier or separated from it by a monosyllabic verb form (or other short item), *much* seems to occur at a higher rate of frequency and to be more generally accepted. It is possible that the usage is being introduced implicationally, with this environment leading. One rather obvious reason for this is the fact that *much* in its use as a determinant with non-count nouns is rather formal (one says *a lot of sand* rather than *much sand*), whereas *not much*, the negative equivalent, is not marked as formal at all (*a lot of sand*; *not much sand*; *not a lot* is marked as colloquial). This is particularly relevant here in that one of the most frequent non-count nouns appearing after *much* in this function is *difference*, and it seems clear that the use of *much* with *different* has been at the very least encouraged by the frequency of occurrence of *much* with *difference*, where it is quite standard. It would not be surprising, then, that forms such as *not... much different* should be more common than simply *much different*, in parallel with the relative frequencies of the corresponding expressions involving *difference*. However, it is not in fact known from any empirical work whether or not *much different* really is more frequent after *not* than elsewhere, still less what the origin and explanation of this difference of frequency might be.

It must be pointed out here that *much better* and other constructions including *much* with an ordinary comparative adjective are *not* in any way marked as formal by constrast with, e.g., *not much better*; *a lot better* is relatively informal (like *not a lot*, although perhaps less markedly informal than this), and *much better* is simply the usual 'neutral' form like *not much sand*). Any motivation for a constraint on *much* with *different*, relating to negation, must clearly derive from constructions with *difference* and other nouns, not those with comparative adjectives.

In respect of all this a further point suggests itself: in addition to *not* (etc.), items such as *very* may also precede *much*. Constructions with *very much* vary a great deal in both acceptability and semantic impact, depending on the type of item which follows. With ordinary comparatives the construction is quite standard, but differs in meaning from that without *very*, being 'emphatic' (parallel with colloquial *very very* before positive adjectives). With positive adjectives it is of doubtful standardness and, if standard, often seems to carry a different, non-empathic meaning (i.e. no extra emphasis on top of that provided by *very* or *much* alone) from *very* alone (*much*, of course does not occur alone here) - see the discussion of *very much feudal* in Newbrook & Yio 1987:105f. With *different* (etc.) its status is presumably equivalent to that of *much different* above (non-standard?), and its meaning is presumably emphatic as with ordinary comparatives - but one cannot, perhaps, be sure. Yio found it to be less frequent where a negative was present, and this might seem unsurprising, since *not much* is perhaps seen as a block expression, and since *not very much* (plus adjective) is a rather lengthy phrase to use unless genuine extra emphasis is involved. Newbrook & Chng 1987 also find use of *very much* in Singapore English with *similar* etc., and this is clearly common elsewhere too.

Whatever the role in the origin of the expression itself of established forms much as *much difference*, it seems clear that one major factor must have been/must be the standard and near-univeral use of *much* as the regular intensifier with comparative adjectives such as *better*, *bigger*, *finer* etc. Indeed, *different*, though not comparative in form, can easily come to be regarded as a comparative, because its meaning is inherently comparative - unlike most formally non-comparative adjectives, it always carries with it the idea of comparison between the entity referred to by the noun phrase in which it appears or to which it forms part of a predicate, and some other entity, and it very frequently takes an overt postmodifier in which this second entity is referred to, in standard English typically introduced by *from*. One might, then, refer to *different* as a lexical comparative. It is thus unsurprising that it has begun to behave like a genuine comparative adjective in this way.

Further evidence in support of this explanation comes from a number of related phenomena. Firstly, *far* can also occur, in some varieties, as an intensifier with *different*. An example from West Wirral is:

26) they have a far different accent from ours

(note use of standard *from* here, rather than *than* as in 22) above, on which point see below.) The intensifier *far* more usually occurs with comparative adjectives, e.g. *far bigger*, *far worse*, but **far big*, **far good*. Secondly, *much*, and perhaps *far*, also seem to occur, for many speakers, with some other adjectives which have a comparative element in their meaning, whilst not being formally comparative; e.g. *preferable* (I take *much preferable*, at least, to be standard, but it is nevertheless unusual given the overall restriction of *much* to the intensification of genuine comparatives. I myself would say, I think, *much preferable* but probably not *far preferable* and almost certainly neither of the forms with *different*, although many standardised speakers such as my mother use these latter forms almost categorically)[7].

Thirdly, and most significanly, *different* seems to be increasingly often followed by *than* rather than by standard English *from*. There are regional and national preferences here, in which *to* (see below) is also implicated, but there seems little doubt that overall *than* is on the increase, particularly in the U.K. Since comparatives are regularly followed by *than*, which serves to introduce their postmodifiers, these two developments, use of *than* and use of *much*, can be seen as aspects of the general absorption of *different*, in syntactic terms, into the class of comparative adjectives. It will be noted that *than* appears in 22) above. There seems, however, to be no categorical implicational link between the use of *much* and the use of *than*, in either direction - all of 27) to 30) seem to occur:

27) she's very different from me (STANDARD)

28) she's much different from me

29) she's very different than me (PERHAPS THE RAREST)

30) she's much different than me

There are, of course, also forms with *to* , with both *very* and *much*. Any statistical implicational patterns presumably work against the occurence of 29) rather than 28) - it is more likely that there are speakers who can produce only the latter than speakers who have only the former. However, in other syntactic environments, e.g. with clausal postmodifiers, forms equivalent to 29) may very well be preferred to those equivalent to 28). We shall see below why this might be so. Empirical studies, in fact, are needed to sort out just which combinations of usage actually occur, and what detailed patterns of usage exist.

It should be noted that *than* can function as a subordinating conjunction as well as a preposition, and thus can introduce clausal postmodifiers very readily (it does so in standard English after genuine comparatives, as in *bigger than I am*, *better than we can*, etc.). In fact, in traditional grammatical accounts of the sort cited above, it is regarded as being invariably a conjunction, and its prepositional function is not recognized, cases such as *bigger than you* being treated as the product of ellipsis, and the appearance after *than* of object-pronoun forms such as *him*, *us* being seen as non-standard. The fact that *than* is at least sometimes a conjunction enables an entire finite subordinate clause to be used as the postmodifier to *different* by those speakers for whom *different than* is possible. This cannot readily be done with *from*, as *from* seems to function as a conjunction are somewhat obscure and are regarded as more remote from standard English. The greater flexibility of *than* must serve to encourage further its use after *different*, where clausal postmodifiers are often required, and must otherwise be introduced by a somewhat clumsy periphrasis. 22) above is a clear example of this. Using *from* one would have to re-cast the postmodifier as a noun-phrase with a head such as *way*, with the subordinate clause postmodifying this head rather than following the connective clearly:

31) it sounds much different from the way (that) it sounds here

This is lengthier and more complex. Alternative forms such as 32), where *from* is simply treated as a conjunction, do not occur widely and would probably be stigmatized:

32) it sounds much different from it sounds here

This is the reason why I remarked above that *than* might very well occur, even after *very*, with this sort of postmodifier.

As a result of this use as a conjunction, *than* is variably followed by subject-pronoun forms, traditionally held to be the result of ellipsis (see above). An alternative form of 30) (the same applies to 29), of course) would thus be:

33) she's much different than I

supposedly ellipted from:

34) she's much different than I am

although of course this would not occur after *different* in standard English, since *than* would not occur here itself. One suspects that forms such as 33) are now rather rare, or at any rate are losing ground to forms like 30), and it may well be the case that *than*, like *after* and several other such items, is coming to possess evenly the double identity of preposition (followed by a single noun-phrase) and conjunction (introducing a finite subordinate clause). Subject-pronoun forms, naturally enough, do not seem to occur after *from*, expect in co-ordination as in 35):

35) she's very/much different from Jane and I

However, little is known about actual patterns of usage here.

As well as many cases of *than* after *different* in the West Wirral data, there were also a number of cases of *than* after *differently*, the adverb, or after *different* used as an adverb (non-standardly):

36) you speak differently than them

(note the form of the pronoun).

37) you treated apprentices different than you do now [8]

This whole issue is rendered still more complex by the variable occurrence of *to* after *different*, and also after other lexical comparatives such as *depleted*; and, occasionally, and presumably by extension, after genuine comparatives. Note the following from the West Wirral:

38) they talk different to us

(*different* adverb again)

40) they have been slightly depleted to what they used to be

Note that *to* in 40) is treated as a preposition, that is, in a standard way, although this particular construction is non-standard. The phrase *what they used to be* forms the prepositional complement - with *compared* or *relative* before *to* and *the way (that)* in place of *what*), 40) would be indisputably standard. In the West Wirral data, *to* was almost always used as a preposition rather than as a conjunction, even in constructions such as these; but occasional use of *to* as a conjunction, parallel with putative similar use of *from* as instanced in 32) above, is found, mainly from'broader' speakers. The only clear-cut case in the West Wirral corpus is:

41) he says all the opposites to I do

Sheer confusion/error/mixed construction may of course play a part here, but I believe that there is in fact a pattern of forms such as 41), although they are certainly not frequent.

The use of *to* after *different* has apparently been extended by some speakers to genuine comparatives, thus further increasing the parallelism between these and *different* itself:

42) an older generation to yourself

(see note 8 for parallel cases with *from*); and *to* also occurs with the noun *difference*, again, presumably, by extension from *different*:

43) the difference to me is considerable

(here the sense was, apparently, 'the difference between X and me', not 'the difference (between X and Y) from my viewpoint/ as far as I can tell". In the latter interpretation, 43) is quite standard and unremarkable).

It appears, however, that *than* itself never appears after *difference* in this way. No case has been brought to my attention, in any event. This perhaps indicates that there is some resistance at this point to the assumption by *than* of full prepositional function - for what reason, grammatical, semantic or other, is unclear.

To return to *to*, this form even occurs, perhaps by further extension from its use in sentences such as 42), after non-comparative adjectives, where there is some idea of comparison:

44) it's very scruffy to what it used to be

(*to* preposition again). In standard English, *compared* or *relative* would again have been required here before *to*.

In addition to the question of *to*, there is still a further major phenomenon associated with *than* to be considered. Perhaps under the influence of these constructions with *to what*, as exemplified in 40) and 44), and in line with the increasingly frequent use of *than* as a preposition with object pronoun forms following (e.g. 29) and 30) above), some speakers seem now to prefer the prepositional interpretation of *than* even where it introduces a finite subordinate clause as the postmodifier of *different* or of a comparative adjective. This leads to the redundant use of *what* after *than* (cf. 40) and 44)), as a dummy noun-phrase head - both with *different* and with genuine comparatives. A typical West Wirral example is:

45) they've got more status than what the working class've got

Whatever the truth about the inspiration for the development of this construction (i.e. is it really based on previously existing forms such as 40) and 44), or are they contemporaneous, later, or only peripherally relevant?), it seems likely that certain parallelism with standard English constructions have at least served to encourage its use. It seems to occur most frequently, and perhaps originally started, with cases such as 45), where there is in fact a noun-phrase in the main clause which parallels the dummy noun-phrase created in the subordinate clause by the use of *what*, both grammatically and semantically. In 45), for instance, the noun-phrase in the main clause is *more status*, which is the object of the clause, and *what* in the subordinate clause refers to such status as the working class is imagined to have and is the object of its own clause. One could replace 45), at greater length and inelegantly, with:

46) they've got more status than the status which/that the working class've got

This could (just) occur in standard English, but would more naturally be reduced to:

47) they've got more status than that which the working class've got

47) still appears very formal, stilted and long-winded. Now in standard English *that which*, *those which*, *the thing(s) which* etc., as antecedent and relative pronoun, juxtaposed, can normally be replaced by *what*, and this option is usually taken for the sake of economy and reduced formality - e.g. *I'll bring what I have* rather than *I'll bring that which I have*. However, there is a blockage, in standard English, upon this use of *what*

for *that which*, in this particular construction, unless *what* carries indefinite meaning, as in *what he did was better than what I did*, etc. Forms such as 47), where the reference of *that* is specific rather than indefinite, thus cannot be replaced by forms such as 45). In fact, *that which* itself might just possibly appear after some comparatives (e.g. *a better car than that which I have* seems a shade more likely than *more status than that which they have*); but the normal usage here ,which does not involve a dummy noun-phrase at all, is the obvious solution (*more status than they have*). If, however, some non-standard varieties lack the blockage referred to, forms such as 45) can readily arise in these - or, if they arise otherwise, they can readily be interpreted in this light. Some anecdotal evidence that this might be at least part of the explanation derived from the fact that, in Merseyside generally, forms such as *that what* and in particular *them what* seem to occur frequently after *than* in constructions of this sort, in place of *what* alone. The form *what*, it should be pointed out, is an all-purpose Merseyside relative pronoun, and *them* is, in Merseyside as in many other locations, the non-standard plural of *that*. These forms thus correspond with standard *that which*, *those which*. There is also some reason to believe that *them as*, and perhaps *them as*, and perhaps *that as*, with the Cheshire (and general North Midlands/ rural North) relative pronoun *as*, appear in the same constructions in conservative Cheshire usage, and this might in fact account for the apparent scarcity of *what* after *than* in Cheshire, since *than that/them as* could perhaps less easily be collapsed to *than what* than *than that/them what* could[9].

In any event, even if all this is so, the construction with *than what* now occurs more generally, that is, including cases where there is no noun-phrase in the main clause with the required grammatical function and meaning. West Wirral cases are:

48) they tend to help you more than what these country people do

49) they speak rather slower than what I speak

(*slower* used as adverb). In 48) the object of the verb-phrase *tend to help* in the main clause, *you*, is not parallel either semantically or grammatically with the noun-phrase headed by *what*, which refers to the help and not to its recipient. (The subject, of course, is not parallel either.) In 49) the verb in the main clause, *speak*, is actually intransitive, and there is no suitable noun-phrase at all.

Redundant *what* also occurs, patterning similarly, after *like* (no good case in this data), and, more especially, after *as*:

50) it's not as bad as what I thought, actually

51) ...same as what they're going out on the fishing boats

In these two, and in particular in 51), there is no question of parallelism between *what* and an overt noun-phrase in the main clause. Of course, in cases such as 48) to 51), there is frequently the possibility of an interpretation involving a notional noun-phrase, or of re-castings in which a noun-phrase of the required type does appear, but the point is that in many cases no such noun-phrase actually appears in the sentences as uttered, and that it is this fact which renders the sentences clearly non-standard.

Whether the constructions with *like what* and *as what* pre- or post-date the appearance of forms such as 45), 48) and 49) is uncertain [10].

It may be useful to summarize here the phenomena we have been examining in this section:

(i) *much different* (including relative frequency of *not much different*
(ii) *far different*
(iii) *much/far preferable*, etc.
(iv) *different than*
(v) *different from* + finite subordinate clause
(vi) *than* + object-pronoun form
(vii) *different(ly) than*
(viii) *different to/ differently to*
(ix) *depleted*, etc., + *to*
(x) *to what*
(xi) *to* + finite subordinate clause
(xii) comparative adjectives + *to*
(xiii) *difference to*
(xiv) non-comparative adjectives + *to*
(xv) *than what* (and its possible origins/ patterning)
(xvi) *like what / as what*

CONCLUSION

Once again, we know very little indeed about the distribution and patterning, not to say the origin, of any of these phenomena. Overall, I have been able to present only a little data, and that largely resisting any worthwhile quantification, much of it from one small area in England, and some speculative/theoretical observations. There is obviously a vast amount of existing research which could be carried out on items of this kind. Reasarch of this kind may be eargerly anticipated.

Notes

1. A further example, involving progressive aspect in addition, is: *we've been telling you this on Saturday* (Yorkshire-raised colleague, in her early thirties, 5/10/83). The phenomenon has also begun to appear in serious writing, sometimes (and initially?) in sentences which might in fact be accepted as (marginally?) standard; e.g. in R. Leith's A Social History of English (1983) we find (*this pronunciation) has remained so (sc. in use among the upper class) at least until the 1930s* (p.137); *during 1980, for instance, parents on Mull have agitated for their children to be educated in Gaelic* (p.178). Perhaps this last sentence was written in late 1980 and not revised; it would have been standard then. American instance is *we have heard of Gala ... just the other way* (I. Asimov, Foundation's Edge (1982), Ballantine ed., p.321).

2. Another factor encouraging this 'copying' may well be the frequency in such protases of forms such as *if you could have done that*. This sort of form can easily be replaced by *if you could have done that* - the phonological parallelism of *could* and *would* doubtless assists here. There are also 'request' forms such as *if you would sit here*, etc., which actually involve *would*. (On *could have done*, etc., see subsequent discussion, note 5.)

3. Cheshire (1982:50) also draws attention to the North American use of this construction (with *would have*). She herself found 5 such sentences, in an 18-hour corpus of spontaneous Reading working-class speech (12 tokens of the variable in all), with *would have*; 1 with *'d have* (?*'d've*), the 'neutral' reduced form, and 1 with *had have* (*if I hadn't have gone to the hospital when I did ...*). Further, Petyt (1977:313f.) observed the use of *'d've* in West Yorkshire usage, and suggests that it is derived ultimately from *would have*, as I have suggested above, rather than *had have* (which Cheshire strangely takes to be standard English). Cheshire feels that this is probably true for Reading also.

4. This issue applies only to 'epistemic' sense of these modals, where they express 'modality'. In 'non-epistemic' senses ('modulation'), where the forms *are* serving as the past equivalents of *can*, etc., *have* is not required (e.g. John could do it = 'was able to'), although in some tense/ aspect combinations periphrasis (of other kinds) is required.

5. Forms such as *could have done*, when they themselves appear in protases of the kind referred to (if you could have done that, etc.), are naturally only past and remote in meaning, like *had fallen* in 9). In fact, these forms, when they involve these particular senses of *could*, etc., are always past and remote, or near-remote, in meaning, regardless of the wider construction in which they appear. They are marked as past by the 'perfective' construction and as remote by the use of *could*, etc., rather than *can*, etc. (cf *she can't have done it, she couldn't have done it*).

6. A further example, from the same colleague, delivered

during a lecture, is: *does everyone see what might've been a problem if it had've been a problem?*. In this case, the meaning appears to be that of standard English *if it had been a problem*, rather than this plus any perfective element, though the speaker himself is inclined to disagree. More ambiguous in this snese is an example from a 1976 popular song ('I'm Mandy, Fly Me' by the group 10 C.C.): *if it hadn't've been for Mandy... well, I wouldn't be here at all.* Another example, again from a popular song, is: *perhaps if we'd've talked he'd've seen something in me* (Gerry Rafferty/ The Humblebums, 'Her Father Didn't Like Me Anyway', 1969). Here the meaning can very easily be taken as past, perfect and remote , i.e. the talking is envisaged as predating the 'seeing something', which is taken as the past time reference point. There are many more cases with *had*, *'d* and *would*. See also Petyt 1985:234f on Yorkshire English. I am grateful to Frances White for helping me to appreciate the complexities asociated with such sentences.

7. Various colleagues report that they would probably) use *far different*. An American instance is provided by *it is a far different sun* (I. Asimov, Foundation's Edge (1982), Ballantine ed p.336). These phenomena seem to occur in the English of Singapore and Malaysia also. On 15/12/83 I overheard a local man of 51 (a speaker of Tamil, Malay, English and a little Hokkien) say *you are very much different*. Similarly, a local woman of 24, a 'Straits-born' Chinese speaker of English, Malay and several Chinese varieties, produced *much different* as a complete utterance, in answer to my *things seem a bit different here*, on 23/1/84. From a completely different part of the English-speaking world comes *it's not too much different in Belize*, spoken on 5/2/84 by a 24-year-old Belizean woman, then staying in Singapore. Many other cases, from all over the English-speaking world, could be cited - for some of them and for Singapore usage, see Newbrook & Yio 1987 (as on all phenomena involving comparatives). Since noticing this usage I have been amazed to find how frequent it is; examples can be read in books and newspapers and heard on radio and television almost daily.

8. *different than* is perhaps more common than *different from* or *to*, on which see below) in North American usage; see Trudgill and Hannah 1982:63 on this - they give here, amongst other examples, the interesting sentence *this one is different from/than what I had imagined* (form with *from* standard, or near-standard, British English, form with *than* North American), on which see below, note 10. At least one instance of *different than* also actually occurs in the same work: *both RP and the variety of N(orth) Am(erican) Eng(lish) described here have a different vowel in 'cot' than in 'caught'* (p.33). One of the co-authors of this work is, however, herself American. A more certainly British case occurs in Cheshire (1982:36); *...the forms of the verb DO are dependent on different factors in Reading English than in standard English*. In both of these cases one factor encouraging the use of *than* is usually the difficulty of using *from* to introduce a lengthy/complex component, even if this component is heavily ellipted, as is

the case in these two examples. See above on the general issue of the relative inflexibility of *from* as against *than*. Like *much different* (see above), this usage is now apparently ubiquitous. It must be noted that there are occasional cases of *from* used (hyper-correctly?) with ordinary comparatives, in attempted avoidance of *different plus than*. A 27-year-old Merseyside man recently said *she deserves better treatment from that*, and a written instance, quoted in full on p.158 of Yio 1985, comes from p.1034 of Wisden Cricketer's Almanack 1983 (*much less a money spinner from ...*).

9. Another example quite closely parallel with 45) is *...a fuller description than what has been presented in this paper*, which was written in an academic paper by M.W.J.F Tay and A.F.Gupta Towards a description of Standard Singapore English, Noss ed. 1983, p.188). In fact, this sentence is at least very close indeed to being standard, since *what... paper* can (just) be interpreted as a standard English *what* - clause of the usual type, functioning as a prepositional complement after *than* (though it is not the favoured standard English construction, and *than* is in fact supposed not to function as a preposition in standard English), and with *what* carrying indefinite meaning ('whatever has been presented...','the various things which have been presented...'). One of the co-authors of this passage is in fact an educated Singapore/Malaysian English speaker, highly standard in general usage. Other instances of this construction can also be found in the English of that area. *I can do better than what I am presently doing* appeared in the Straits Times on 2/11/83 (the sentence was part of the officially-circulated questionnaire). Another instance, produced by a young Singaporean adult on 1/11/83, was: *(it goes) faster than what I expected it to*. Neither of these examples involves any noun-phrases of specific rather than indefinite reference and are thus also non-standard. Local speakers of English report that his sort of usage is in fact common in the area.

10. The example cited by Trudgill & Hannah (see note 8 above) illustrates again one environment where *what* fairly readily occurs after *different* in usage that is at least near-standard- namely, after a preposition such as *from*. It is not clear whether *what*, in cases such as this, is 'derived' from *that which* or not - it is also perhaps doubtful whether all British speakers would accept sentences of this type as genuinely standard (see also above). Nevertheless, the usage is, of course, common, and may well encourage further the use of *what* after *than* (and *to*). It cannot, it seems, be the sole motivating factor for these constructions, since *than what* is, of course, also used after genuine comparatives, where *from* (and *from what*) do not occur in standard English, or in any other varieties, as far as I know (but see note 8). However, it is possible that this use of *what* began, historically, with *from what*, after *different*, spread to *than what* (after *different*), and then spread further to *than what* after genuine comparatives. Cheshire found cases of this type in Reading, e.g. *I probably have got...done* (sc. fined, etc.) *more than what he got done* (1982:47) (no suitable noun-phrase);

I talk ever so different to what they do (1982:74) (note: a) *different* present (as an adverb), b) *to* used, c) absence of a suitable phrase). The usage is in fact doubtless widespread. A further example, produced by a Yorkshire-raised soccer manager in a BBC radio interview on 12/11/83, is *I think we had a couple more chances than what Liverpool did* (in the same interview he also produced an instance of *'d've*: *I think it would've been a pity if either side'd've lost it*). On 27/11/83 a second soccer manager, a Londoner, produced *...unless you work as hard as what they do* (no suitable noun-phrase in a similar context.

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The Effect of Explicit Instruction on the Acquisition of English Grammatical Structures by Chinese Learners[1]

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1. INTRODUCTION

The role of formal instruction in second language acquisition (hereinafter SLA) research has long been a controversial issue. Research findings from morpheme and "relative utility" studies have led to a conflict of opinion among second language acquisition researchers and teaching professionals on the question whether there is any need to teach grammar. Some hold that given a "natural order" in acquisition, grammatical teaching is unnecessary (Terrel 1981, Higgs and Ciffort 1983, Krashen 1981, 1982). Others argue that even if formal instruction does not affect the route of SLA, it has some effect on the learning rate. In other words, raising learners' consciousness of grammatical properties may accelerate SLA. In the second language classroom, learners should be made aware of the grammatical properties of the target language (Sharwood Smith 1981, Rutherford 1987).

Out of this debate grew two conflicting theories. The monitor theory postulated by Krashen advocates that there is no interface between explicit and implicit knowledge; according to him, learning is independent of acquisition. Protagonists of the interface position represented by Bialystok, Sharwood Smith, Mclaughlin argue, however, that there is an interface between explicit and implicit knowledge. One can be converted into the other by dint of practice. The teacher's task, therefore, is to sensitize the learner to specific linguistic properties and provide opportunities for them to practice the learnt properties.

Empirical studies have been carried out in the past decades in an attempt to find evidence in support of formal instruction. Due to the methodological problems in their research design, the findings from these studies are ambiguous. While some are in favour of formal instruction, some show negative effects; others do not offer clear results. The ambiguity had something to do with research method applied. Three problems will be identified:

i) Some of the studies do not measure the absolute effect of formal instruction on the acquisition of specific grammatical properties, but examine the "relative utility" of formal instruction.

Long (1983) presents a comprehensive review of the relevant studies on the effect of formal instruction. These studies investigated the effect of formal instruction on the L2 proficiency in relation to the effect of simple exposure to the L2 learner in naturalistic settings. The problem is that most of the investigations were carried out in acquisition-rich environments where English is the target language. In such environments, learners had access to L2 through both formal instruction and natural exposure. Therefore, when analyzing the results, it is difficult to separate the effects of instruction and exposure.

ii) The second problem is that some of the studies looked at the combination effect of several features of formal instruction rather than a single feature.

Take Von Elek and Oskarsson's experiment (1972) for example. In their study, five grammatical properties were taught in the experimental lesson series. 125 adult learners of English were assigned to two groups and treated with explicit and implicit methods respectively. The results revealed that after 40 hours of instruction, both groups made some progress in the acquisition of the structures. But the explicit group made better progress than the implicit group. They concluded then the explicit method was more effective than the implicit method. However, the two methods adopted in their study differed not only in the feature of explicitness but also in other features such as the deductive/inductive presentation of the rules and different exercise types: pattern drills vs. fill-in-the-blanks and translation task. When interpreting the data, it is difficult to identify which feature is the decisive factor that contributes to a better progress in learning.

iii) The third problem is related to the duration of the experiment.

To the best of our knowledge, the only small-scale, feature-focused research, which was carried out by Seliger (1975), evaluates the inductive and deductive methods with regard to one aspect of syntax, i.e. the pre-nominal modifiers. The only difference between the two methods had to do with the point at which explanation was given in the lesson. Seliger observed that the deductive method was superior to the inductive method in respect to long term retention. But in this study, instruction took place for too short a period of time (only 65 minutes). No broad generalization can be drawn from a single limited-duration study such as this.

It should also be noted that the majority of the studies on the effect of formal instruction have not been framed in terms of the theoretical notion of the interface position. Only two empirical studies related the findings to the interface debate (Van Baalen 1983, Ellis 1984). The findings from Van Baalen's study was in favor of the interface position: the explicit group outperformed the implicit group on the easy rules in spontaneous language production, lending support to the argument that explicit knowledge can be converted into implicit knowledge. Ellis' study confirms neither the interface nor the non-interface position, although some of the findings were compatible with Krashen's theory. Ellis maintains that more studies should be carried out before either the interface or the non-interface position can be confirmed.

From the above discussion, we can see that in order to gain a clearer picture on the effects of various kinds of formal instruction, more empirical studies should be carried out. These studies should incorporate the following characteristics: (a) The experiment should be done in an acquisition-poor setting where learners have no target language exposure outside the classroom. (b) It should focus on one feature of formal instruction. (c) The formal instruction given to the students should last a reasonable period of time.

The present study represents an attempt to examine the absolute effect of formal instruction on SLA. The experiment has tried to incorporate the three features mentioned above: it was conducted in one of the middle schools in Shanghai, China, an acquisition-poor setting. It took place over a period of three weeks. It focused on just one feature: the explicitness of formal instruction.

2. PURPOSE OF THE STUDY

The main objective of the present study was twofold: first,to investigate the role of formal instruction in SLA by comparing the effects of two methods, explicit formal instruction and implicit formal instruction, on Chinese adolescent learners of English. In this study, formal instruction denotes the kind of instruction that draws learners' attention to the formal characteristics of the grammatical features. Explicit formal instruction is defined as the method in which learners are required to work out and articulate the grammatical properties and rules if they can. The teacher provides explanations of the properties and rules with metalanguage within the students' grasp (mainly in their native language). Implicit formal instruction refers to the method whereby the learners are guided to make generalizations on their own. No explanations of the properties and rules are given. These two methods were compared with respect to the learners' acquisition of the three areas of grammar: the simple past tense, the present perfect and the passive construction. The second objective of the study was to ascertain if there existed an interface between explicit knowledge and implicit knowledge. The research hypotheses for the experimental survey were:

1) Formal instruction in general is conducive to the success of SLA. It helps L2 learners to improve their

proficiency in the production of well-formed sentences in different learning tasks.

2) Explicit formal instruction is more effective than implicit formal instruction in accelerating the rate of SLA. The EFI group will make better progress than the IFI group in the performance of different tasks.

3) There is an interface between explicit and implicit knowledge. Through formal and functional practice, explicit knowledge can be converted into implicit knowledge.

3. THE DESIGN OF THE STUDY

3.1 The subjects

The sample used in this research consisted of forty grade 8 students in Beihai Middle School in Shanghai. All of them volunteered to take part in this ESL program. Table 1 presents the characteristics of the sample.

Table 1. CharacteristRics of the Subjects

Number of subjects:	40
Number of schools:	1
Secondary level:	2
Age range:	14-15
Sex: Male	16
Female	24
Motivation:	high
Target language exposure:	classroom only

These subjects were randomly assigned to the two treatment groups on the basis of prior English proficiency level as reflected by their (a) test score on a cloze test, (b) average academic score, (c) pre-test score. One group received explicit formal instruction (EFI), the other received implicit formal instruction (IFI).[2]

Table two provides data for a comparison of the two treatment groups with regard to their prior proficiency in English.

Table 2 Comparison of the Initial Proficiency in English Between the Two Treatment Groups

TEST	Treatment Group						
	EFI			IFI			
	N	$\overline{X}$ (%)	S	N	$\overline{X}$ (%)	S	2-tail Prob
Pre-test	20	33.73	0.065	20	34.93	0.055	0.543
Cloze test	20	69.04	0.187	20	70.71	0.156	0.581
Academic score	20	90.16	0.082	20	90.12	0.103	0.354
Total		192.93			194.76		

As can be seen, there was no significant difference between the two groups in respect to their prior English proficiency. In terms of the total raw scores, the IFI group was slightly superior to the EFI group.

3.2 The experimental lesson series

The experimental lesson series consisted of eighteen 50-minute experimental lessons per method. In order not to interfere with the regular course, all the lessons were conducted after normal classes (from 3.00-500 p.m.). The investigator taught both EFI and IFI groups. Each group had two periods of classes on alternate days in which 11 grammatical properties of the three structures were taught. The distribution of the 11 properties of the three structures are presented in Figure 1:

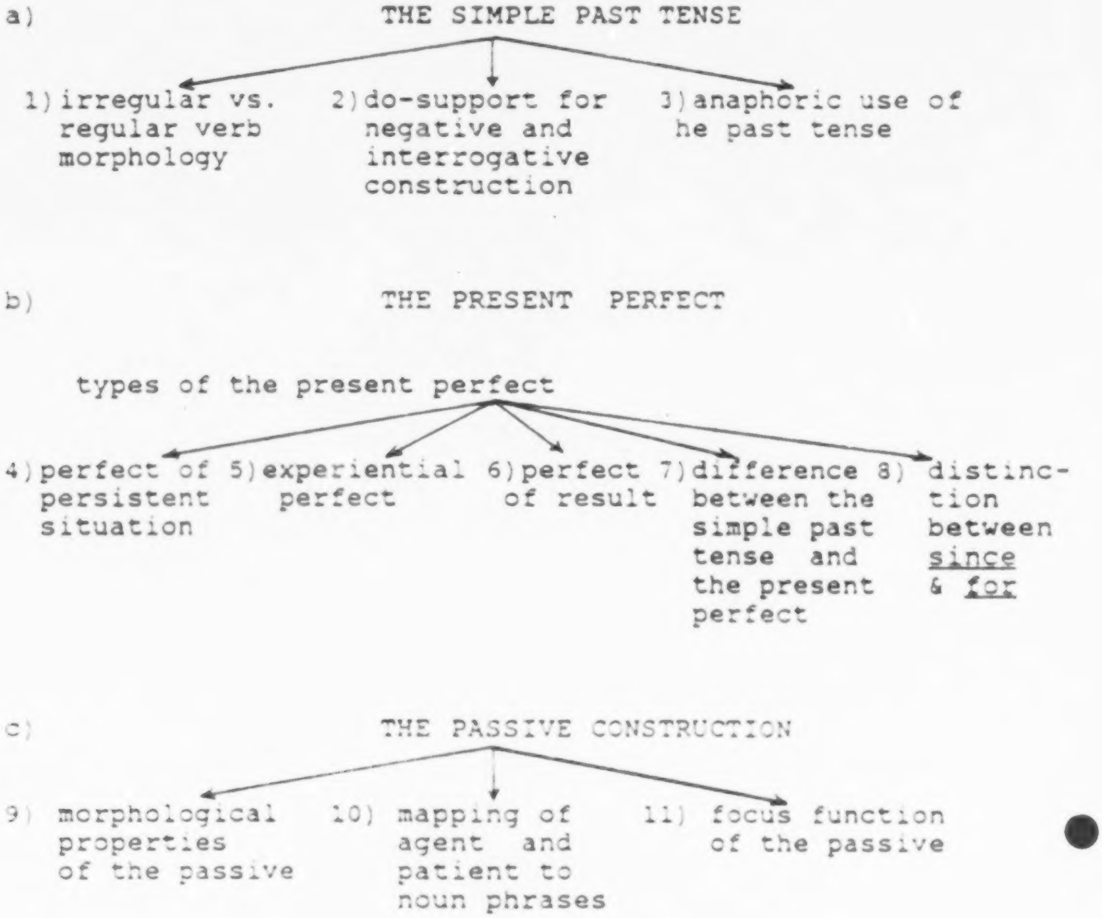
a)
THE SIMPLE PAST TENSE
1) irregular vs. regular verb morphology
2) do-support for negative and interrogative construction
3) anaphoric use of he past tense
b)
THE PRESENT PERFECT
types of the present perfect
4) perfect of persistent situation
5) experiential perfect
6) perfect of result
7) difference between the simple past tense and the present perfect
8) distinction between since & for
c)
THE PASSIVE CONSTRUCTION
9) morphological properties of the passive
10) mapping of agent and patient to noun phrases
11) focus function of the passive

Figure 1. Distribution of 11 Grammatical Properties

These properties were selected according to the following principles:

a) They should be easy enough for the students at this level to learn (The low scores of the pre-test and the relative high scores of the post-test suggest that the choice of the structures was appropriate (see Table 9).

b) They should be structures that present special difficulties to Chinese learners and were found to be sources of errors in the classroom, presumably because of syntactic differences between the two languages.

c) They should not have been dealt with in the regular course and were unknown to the subjects.[3]

Since the selected three structures are not equally complex, the proportion of time devoted to each structure varied. The schedule of all experimental activities is given in Table three:

Table 3. Schedule of Experimental Activities

Weeks	Days	Experimental Activity
I	Friday	cloze test & pre-test (part A)
	Saturday	pre-test (part B, C)
II	Monday & Wednesday	the past tense (IFI group)
	Tuesday & Thursday	the past tense (EFI group)
	Friday	the present perfect tense (IFI group)
	Saturday	the present perfect tense (EFI group)
III	Monday, Wednesday and Friday	the present perfect tense (IFI group)
	Tuesday, Thursday and Saturday	the present perfect tense (EFI group)
IV	Monday, Wednesday and Friday	the passive voice (IFI group)
	Tuesday, Thursday and Saturday	the passive voice (EFI group)
V	Monday	post-test (part A)
	Tuesday	post-test (part B, C)

3.3 Methods compared

The two methods adopted in this study had much in common in terms of teaching techniques. The only difference between the two was related to the degree of explicitness in the explanation of the grammatical features. Figure 2 summarizes the classroom activities carried out in the two groups.

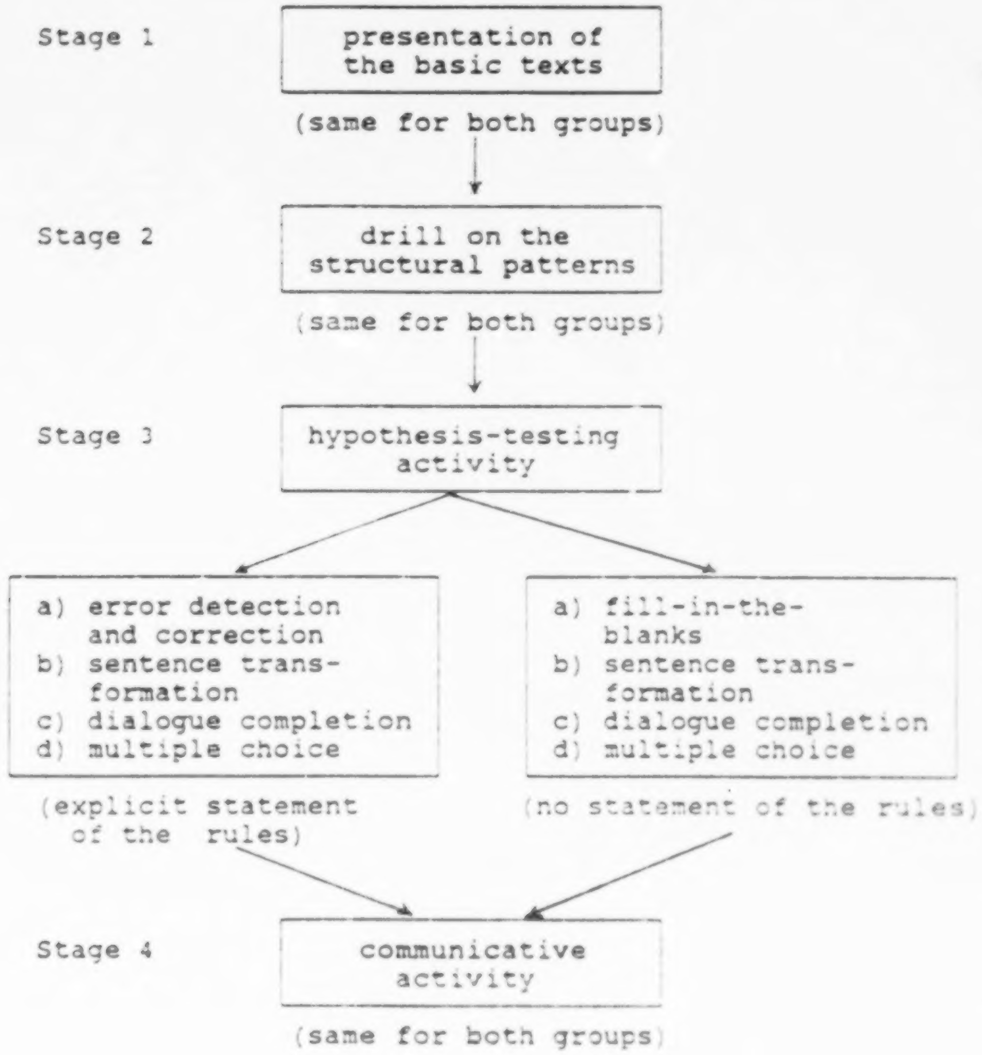
Stage 1
presentation of the basic texts
(same for both groups)
Stage 2
drill on the structural patterns
(same for both groups)
Stage 3
hypothesis-testing activity
a) error detection and correction
b) sentence transformation
c) dialogue completion
d) multiple choice
(explicit statement of the rules)
a) fill-in-the-blanks
b) sentence transformation
c) dialogue completion
d) multiple choice
(no statement of the rules)
Stage 4
communicative activity
(same for both groups)

Figure 2. Teaching and Learning Activities in the Classroom

It can be seen that in the first, second and fourth stages, the two groups performed the same activities. In the third stage, however, four types of hypothesis-testing activities were assigned to each group three of which were the same (dialogue completion, sentence transformation, multiple choice). But the error detection and correction activity was only performed by the EFI group; the IFI group had the fill-in-the-blank exercise. It should be mentioned that although the exercise type differed, the contents of the exercise were exactly the same. That is to say, the same grammatical properties were practiced. The assignment of the different tasks to different groups was dictated by the principle that in the IFI group, grammar should be taught in an implicit/covert way, while in the EFI group, the learners should learn the grammar explicitly/overtly. The grammatical information should be openly presented and explicitly explained. Therefore, the learners in the EFI group were directly exposed to grammatical errors. It was assumed that by drawing the learner's attention to such erroneous sentences, their consciousness of the grammatical properties would be better raised. This also accords with Rutherford's (1987) postulation that one of the instruments to raise learners' consciousness of aspects of the grammatical system could be error identification and correction.

In accordance with the principle set forth for the experiment, the learners in the EFI group were asked to articulate the regularities they had discovered; the teacher explained the rules when necessary. In the IFI group, no rule statement was given.

Two versions of a workbook comprising 18 worksheets were compiled, one for each group. Most of the texts and exercises were selected from "PROJECT ENGLISH" volume II written by Hutchinson (1986). The book was claimed to adopt an analytical approach in which learners were treated as thinkers who were guided to work out the rules themselves. This principle is identical with the principle we laid down for the experiment. This book, therefore, serves well the purpose of the present study. But we adapted the text to our experimental purpose, because each unit in the text contains far more exercises than can be covered in the experimental lesson. In order to control the teaching variable, the subjects were not allowed to bring the workbook home. There was no homework for them. The teacher collected the workbooks after class.

3.4 Measurement instruments and data analyses

To investigate the efficacy of the two methods with respect to the 11 grammatical features of the three structures, an achievement test battery was designed and used both as pre- and post-tests to measure the subjects' progress. It was a written test with 246 grammar items divided between 11 grammatical properties. The subjects were required to perform five tasks, namely, error detection, error correction, passage/dialogue completion, reading comprehension and spontaneous language production (see Appendix I-V, test samples). Table 4 presents the items of the achievement test:

Table 4. The Achievement Test

Tasks	Number of testing items	Properties tested
Error Detection	80	1 - 10 except 11
Error Correction	80	1 - 10 except 11
Sentence Completion	44	1 - 11
Reading Comprehention	14	7, 10
Spontaneous Production	28	3, 7, 11
Total: 5	246	11

In the error detection and correction tasks, 80 grammar items were tested, half of which were correct (eight for each property, except the function of the passive). The first part of the judgement task was composed of 20 sentences. The learners were not told which structure was being investigated, but they were told some sentences contained errors. In the second part of the judgement test, some of the verbal forms were underlined and numbered. The learners were asked to make judgements about the acceptance of the sentences first and then make corrections if necessary.

The third task was an ordinary sentence completion test with 44 grammar items, four for each property. The learners were required to answer the questions with the information given or fill in the blanks with proper verb forms (see Appendix I and II).

The reading comprehension test was specially designed to examine the subjects' understanding of the temporal and aspectual properties of the simple past tense and the present perfect (see Appendix III).

The last task was a spontaneous production test in which the subjects were required (i) to describe a series of actions the teacher performed (ii) to describe the pictures with the words given (see Appendix IV and V). These two kinds of tests were formerly employed by Smith (1979) and Van Baalen (1983) in order to elicit the learner's internalized/acquired knowledge of the language. We assume along with Smith and Van Baalen that improved spontaneous performance indicates a high level of automatization of the target language, and that the explicit knowledge which the subjects obtained during the course of instruction was transferred into implicit knowledge.

The test items in the spontaneous language production task covered all the three structures: part (i) was related to the different use of the simple past tense and the present perfect; part (ii) examined the use of the passive construction. In the first four tasks, namely, error detection, error correction, sentence completion, reading comprehension, no time limit was set. But a time limit was imposed on the last task,. When the teacher was performing the actions, the subjects were required to write down simultaneously the appropriate sentences. Altogether 15 minutes were set for the last task. So the learners had no time to monitor their performance. It was assumed that the action /picture description would elicit natural, acquired knowledge.

The achievement test was administered both as a pre-test and post-test, so that comparisons can be made to see whether there was any significant difference between the scores from the two tests.

All the test papers were scored by the investigator. Both binary and ternary scales were used in scoring. For example, in the error detection task, a binary scale was employed. If an error was discerned by the subject, 4 points would be given. If the subject failed to spot the error or took the right version for the wrong one, he received a 0. In error correction, a ternary scale was adopted. If a correct version was supplied, the subject received 4 points. But if the verb form was partly right, a score ranging from 1 - 3 was given. For example, given the following erroneous sentence:

All the cakes has ate by the guests.

If the subject changed the sentence to **"all the cakes have been eaten by the guests"**, he received 4 points.

The correction **"All the cakes have been aten by the guests"** would be scored 3 points.

2 points would be given to the answer **"All the cakes have been ate by the guests."**

The subject would receive 1 point if he corrected the sentence as **"All the cakes has aten by the guests."**

The ternary scale was also used in the sentence completion and action/ picture description tasks. In the reading comprehension task, the binary scale was used. Any correct version of the test item received 4 points. The total score for the achievement test was 984 points (246 x 4).

The results from both pre-and post-tests were hand tabulated and numerically coded. They were then entered into a data file and were statistically analyzed using the Statistical Package for the Social Science (SPSS). T-tests and paired t-tests were utilized to determine if there was significant difference in the subjects' performance in the pre- and post-tests. The following section reports the results of the statistical analyses.

4. RESULTS OF STATISTICAL ANALYSES

This section presents the results of statistical analyses. As a measure of determining whether the two teaching methods produced significant results, t-test and paired t-test were performed. These tests measure and statistically compare the results of the pre- and post-tests from two dimensions: a) the learner's performance on the test items across the five learning tasks, b) their performance on the test items of the eleven grammatical properties. The following tables display the descriptive statistics. All the mean accuracy scores were reported in percentage.

4.1 Comparison of mean scores in pre-and post-tests for each group in terms of tasks

Paired t-tests were used to measure and compare statistically the results of the pre- and post-tests within each method to see if there is a significant gain on the post-test in each case. Table 5 shows the results of the statistical analysis for the IFI group with regard to the four tasks.

Table 5. Pre vs. Post Tests for the IFI Group with Regard to the Four Tasks.

	PRE-TEST			POST-TEST				
TASK	N	X	S	N	X	S	T	2-tail Prob.
ED	20	38.76	0.076	20	74.77	0.072	-15.34	* 0.000
EC	20	37.27	0.078	20	70.28	0.078	-13.33	* 0.000
SC	20	29.51	0.073	20	67.96	0.100	-13.88	* 0.000
CO	20	48.47	0.125	20	69.86	0.109	-5.87	* 0.000

Notes: ED = error detection, EC = error correction
SC = sentence completion CO = reading comprehension

As shown in Table 5, the figures for 2-tailed probability indicate that the IFI group made marked progress in terms of overall performance on test items across task types. There is significant difference in results between pre- and post- test scores at the .01 level.

Table 6. Pre vs. Post-tests for the EFI Group
with Regard to the Four Tasks

	PRE-TEST			POST-TEST				
TASK	N	$\overline{X}$	S	N	$\overline{X}$	S	T	2-tail Prob.
ED	20	36.59	0.080	20	80.47	0.081	-17.20	* 0.000
EC	20	35.67	0.080	20	77.71	0.098	-15.71	* 0.000
SC	20	28.08	0.087	20	77.27	0.105	-16.10	* 0.000
CO	20	44.58	0.187	20	84.31	0.107	- 8.27	* 0.000

Table 6 demonstrates that like the IFI group, the EFI group improved significantly across all task types over the instruction period, all figures for 2-tail probability show significance at the .01 level

4.2 Comparison of mean scores in the pre-and post-tests for each group in terms of the 11 syntactic properties

Table 7 and Table 8 show the subjects' performance on the test items across the 11 linguistic properties:

Table 7. Comparison of the Pre- and Post-tests for
the IFI Group with Regard to the Properties

		PRE-TEST			POST-TEST				
PROPERTY		N	$\overline{X}$	S	N	$\overline{X}$	S	T	2-Tail Prob
PST	IR	20	46.48	0.165	20	81.92	0.110	-8.00	•0.000
	DS	20	57.75	0.177	20	60.87	0.230	-0.48	0.633
	AN	20	72.75	0.137	20	84.37	0.144	-2.73	•0.010
PP	EX	20	21.06	0.150	20	78.75	0.156	-11.92	•0.000
	RE	20	13.50	0.132	20	64.06	0.192	-9.70	•0.000
	PE	20	23.31	0.146	20	73.37	0.156	-10.46	•0.000
	DI	20	44.69	0.084	20	67.12	0.022	-7.78	•0.000
	SF	20	35.42	0.133	20	68.15	0.043	-6.30	•0.000
PAS	AG	20	20.62	0.093	20	75.87	0.109	-17.19	•0.000
	FC	20	0.94	0.042	20	67,50	0.337	-8.76	•0.000
	FO	20	18.12	0.118	20	78.06	0.068	-19.74	•0.000

Table 8. Comparison of the Pre- and Post-tests for the EFI Group with Regard to the Properties

		PRE-TEST			POST-TEST				
PROPERTY		N	$\bar{X}$	S	N	$\bar{X}$	S	T	2-tail Prob
PST	IR	20	47.08	0.145	20	87.00	0.109	-9.83	*0.000
	DS	20	59.12	0.112	20	77.56	0.178	-3.92	*0.000
	AN	20	71.25	0.114	20	90.25	0.099	-5.58	*0.000
PP	EX	20	25.31	0.142	20	79.75	0.185	-10.43	*0.000
	RE	20	13.50	0.110	20	68.25	0.042	-11.20	*0.000
	PE	20	22.50	0.133	20	77.69	0.185	-10.83	*0.000
	DI	20	46.87	0.065	20	77.37	0.136	-9.07	*0.000
	SF	20	35.58	0.023	20	71.87	0.238	-6.59	*0.000
PAS	AG	20	13.25	0.114	20	80.31	0.081	-22.12	*0.000
	FC	20	1.87	0.061	20	90.00	0.082	-38.49	*0.000
	FO	20	15.37	0.144	20	83.56	0.090	-17.97	*0.000

Notes: PST = the simple past tense
IR = forms of irregular verbs
DS = do-support for negative and interrogative construction
AN = anaphoric use of the past tense
PP = the present perfect
EX = experiential perfect RE = perfect of result
PE = perfect of persistent situation
DI = difference between the simple past tense and the present perfect
SF = distinction between _since_ and _for_
PAS = the passive construction
AG = mapping of agent and patient to NP slots
FO = morphological properties of the passive
FC = focus function of the passive

As evident in Table 7 and Table 8, in respect to the 11 grammatical features, both methods led to significant progress in performance at the .01 level.

Through an analysis of paired t-tests, all of the pre- and post-test scores in the above four tables were found to be significantly different at the .01 level. This finding suggests that each method in itself (IFI, EFI) provided the students a chance to improve considerably on

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language proficiency in this four-week program, lending support to the argument that formal instruction in general is conducive to SLA, be it implicit or explicit.

In order to see which method is more effective in accelerating the rate of SLA, t-tests were performed to compare the mean accuracy scores of the two groups in the pre- and post tests. The data was first analysed to obtain the overall achievement scores.[5]

Table 9. Comparison of the Overall Achievement Scores of the Two Groups in the Pre- and Post-tests

	EFI GROUP			IFI GROUP				
	N	$\overline{X}$	S	N	$\overline{X}$	S	T	2-tail Prob
PRE-TEST	20	33.73	0.065	20	34.93	0.055	-0.63	0.543
POST-TEST	20	79.09	0.091	20	71.67	0.078	2.78	• 0.009

Table 9 demonstrates that in the pre-test there is no significant difference between the two groups, while in the post-test, the two groups differ significantly at the .01 level.

4.4 Comparison of the mean scores of the two groups in the pre- and post- tests in terms of tasks

The mean accuracy scores of the two groups were also compared across task types, the following two tables show the results of the statistical analysis in the pre- and post-tests:

Table 10. Comparison of the Pre-tests Results in Terms of Tasks

	EFI GROUP			IFI GROUP				
TASK	N	X	S	N	X	S	T	2-tail Prob.
ED	20	36.56	0.080	20	38.76	0.076	-0.88	0.385
EC	20	35.67	0.080	20	37.27	0.078	-0.64	0.529
SC	20	28.08	0.087	20	29.51	0.073	-0.56	0.576
CO	20	44.58	0.187	20	48.47	0.125	-0.70	0.444

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Table 11. Comparison of the Post-test Results in Terms of Tasks

	EFI GROUP			IFI GROUP				
TASK	N	$\overline{X}$	S	N	$\overline{X}$	S	T	2-tail Prob.
ED	20	84.41	0.018	20	78.36	0.076	2.43	* 0.020
EC	20	81.33	0.090	20	73.60	0.081	2.87	* 0.007
SC	20	80.16	0.088	20	70.14	0.110	3.18	* 0.003
CO	20	84.31	0.107	20	69.86	0.109	4.24	* 0.000

It is observable that in the pre-test, there was no significant difference between the two groups of scores, while significant difference can be discerned across all the task types in the post-test, showing that the EFI group did conspicuously better than the IFI group in carrying out various learning tasks. We may venture to conclude that the explicit instruction is more effective than the implicit instruction in speeding up the learning rate. However, this conclusion turned out to be premature -- when we compared the mean scores of the two groups across the grammatical properties, a different picture emerges.

4.5 Comparison of mean scores of the two groups in the pre- and post-tests in terms of the eleven syntactic properties

Table 12 demonstrates the subjects' performance on the test items across the 11 properties in the pre-test. It can be seen that in the pre-test, generally no significant difference was found between the two groups. The subjects had the low score on the passive construction, but a significant difference was found between them vis-a-vis the property of "AG" $(p<.05)$: the IFI group performed better than the EFI group with regard to the mapping of the agent and patient to NP slots. It should also be noted that a near significant difference between the two groups was found for the property of "FC" with the EFI group performing better in respect to the foregrounding or focus function of the passive.

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Table 12. Comparison of the Pre-test Results in Terms of Properties

PROPERTY		EFI GROUP N	$\bar{X}$	S	IFI GROUP N	$\bar{X}$	S	T	2-tail Prob.
PST	IR	20	47.08	0.145	20	46.48	0.165	0.12	0.903
	DS	20	59.12	0.112	20	57.75	0.177	0.29	0.771
	AN	20	71.37	0.114	20	72.25	0.137	-0.22	0.827
PP	EX	20	25.31	0.032	20	21.06	0.150	0.92	0.362
	RE	20	13.50	0.110	20	13.50	0.132	0.00	1.000
	PE	20	22.50	0.133	20	23.31	0.146	-0.18	0.855
	DI	20	46.87	0.065	20	44.69	0.084	0.92	0.362
	SF	20	35.58	0.105	20	35.42	0.137	-0.48	0.631
PAS	AG	20	13.25	0.114	20	20.62	0.093	-1.24	*0.031
	FO	20	15.37	0.144	20	18.12	0.026	-0.66	0.512
	FC	20	1.87	0.094	20	0.94	0.042	0.57	0.071

Two observations can be made based on Table 13. Firstly, there is a clear statistical difference between the two groups in the passive construction. A significant difference can be discerned in all the three properties of the passive construction. The EFI group did conspicuously better than the IFI group in the use of the foregrounding function of the passive (FC p = 009, raw score: 90/67%). In the other two properties, namely, the mapping of the agent and patient to the NP slots (AG) and the morphological properites of the passive (FO), significant differences at the level of .05 are found. Secondly, the two groups showed no clear statistical difference on the acquisition of tense and aspect. Among the eight properties relating to tense and aspect, only two (do support and difference between the simple past tense and present perfect) reached the level of significance. From the data available, we may claim that explicit instruction is more effective than the implicit instruction in teaching the passive construction. The former is not superior to the latter as far as tense and aspect are concerned.

Table 13. Comparison of the Post-test Results in Terms of Properties

		EFI GROUP			IFI GROUP				
PROPERTY		N	X	S	N	X	S	T	2-tail Prob.
PST	IR	20	87.00	0.109	20	81.92	0.110	1.46	0.151
	DS	20	77.56	0.178	20	60.87	0.230	2.57	*0.015
	AN	20	90.25	0.099	20	84.37	0.144	1.50	0.142
PP	EX	20	79.75	0.185	20	78.75	0.156	0.18	0.855
	RE	20	68.25	0.189	20	64.06	0.192	0.69	0.491
	PE	20	77.69	0.185	20	73.37	0.156	0.80	0.431
	DI	20	77.37	0.136	20	67.12	0.098	2.74	*0.010
	SF	20	71.87	0.238	20	68.15	0.190	0.55	0.587
PAS	AG	20	82.31	0.081	20	75.87	0.109	2.12	*0.042
	FO	20	83.56	0.090	20	78.06	0.068	2.18	*0.036
	FC	20	90.00	0.082	20	67.50	0.337	2.90	*0.009

Table 14 exhibits the results of the spontaneous production test designed to examine the interface position.

Table 14. Comparison of Mean Scores of the Two Groups in Spontaneous Language Production in the Post-test

	EFI GROUP			IFI GROUP				
SPONTANEOUS PRODUCTION	N	X	S	N	X	S	T	2-tail Prob.
	20	87.29	0.112	20	71.57	0.215	2.87	*0.008

This table reflects that the EFI group did significantly better than the IFI group in both action and picture description tasks. suggesting that there is an interface between the explicit and implicit knowledge.

In order to find further evidence in support of the above findings, the individual gain scores and then the gain scores of the two groups were computed and compared in terms of tasks and properties as well. The following tables show the results:

Table 15. Comparison of the Gain Scores of the Two Groups in Terms of Tasks

	EFI GROUP			IFI GROUP				
TASK	N	X	S	N	X	S	T	2-tail Prob
ED	20	43.88	9.52	20	36.01	8.07	2.05	* 0.048
EC	20	42.04	10.08	20	33.01	8.19	2.32	* 0.026
SC	20	49.19	3.96	20	38.45	4.77	2.47	* 0.018
CO	20	39.73	10.96	20	21.39	8.49	3.67	* 0.001

Table 15 demonstrates that the difference in favour of the EFI group is significant at the .05 (ED, EC, SC) and .01 (CO) level.

Table 16. Comparison of the Gain Scores of the Two Groups in Terms of Properties

		EFI GROUP			IFI GROUP				
Property		N	X	S	N	X	S	T	2-tail Prob.
PST	IR	20	39.92	12.41	20	35.44	12.15	0.99	0.328
	DS	20	18.44	14.39	20	3.12	15.63	1.78	0.083
	AN	20	19.00	11.41	20	11.62	13.55	0.38	0.707
PP	EX	20	54.44	21.75	20	57.69	20.43	-0.26	0.795
	RE	20	54.75	17.59	20	50.56	14.91	-0.13	0.900
	PE	20	55.19	16.35	20	50.06	19.32	0.89	0.378
	DI	20	30.50	12.39	20	22.43	11.30	1.64	0.109
	SF	20	36.29	13.30	20	32.73	17.25	1.11	0.275
PAS	AG	20	67.06	9.33	20	55.25	11.38	3.34	*0.002
	FO	20	88.13	11.21	20	66.56	9.56	2.00	0.053
	FC	20	68.19	1.518	20	59.94	5.42	3.39	*0.003

As is clear from table 16, no significant difference was found in the properties related to tense and aspect. But in the passive construction, a significant difference was found on the items related to the mapping of semantic roles to NP position (AG $p<.01$) and the foregrounding of the passive (FC, p<.01). A near significant difference at the .05 level can also be seen with respect to the morphological properties of the passive (FO).

It is interesting that the result from the comparison of the gain scores of the two group is identical to that of the comparison of the post-test scores of the two groups. The EFI group performed significantly better than the IFI group across task types. But with regard to the grammatical properties, the former did not outperform the latter, except on the passive construction.

The results of the study can be summarized as follows:

i) Positive findings have been obtained which show that form-based classroom instruction is conducive to the success of SLA. Through three weeks of instruction, the learners in both groups made significant progress in the acquisition of the three grammatical structures. The comparison of the pre- and post-tests scores within groups has provided evidence to support the first hypothesis that formal instruction in general has positive effects on SLA.

ii) The second hypothesis is only partially confirmed by the statistical analyses. The available data have indicated that explicit formal instruction is more effective than implicit formal instruction in accelerating the rate of the learners' acquisition of the passive construction. However, this is not true of the subjects' acquisition of tense and aspect. As far as tense and aspect are concerned, explicit instruction is not superior to implicit instruction.

iii) The result of the spontaneous production test appears to be in favour of the interface position. The EFI group did significantly better than the IFI group, suggesting that explicit knowledge can be converted into implicit knowledge through practice.

5. DISCUSSION

The findings from this study indicate that formal instruction in general is conducive to the success of SLA. The scores obtained from the pre- and post-tests within each group have provided ample evidence to support the first hypothesis.

a) Marked Improvement on Test Items Across Task Types and Properties in Both Groups

As reflected in Tables 5 to 8, there was substantial overall progress in each group as a result of experimental lessons. Both EFI and IFI functioned well and led to significant differences at the .01 level both across task types and properties. Taking the scores of the properties as a starting point, it can be observed that the initial scores of the present perfect and the passive construction were very low, ranging from 0.94% to 46.87% (cf. Table

12). However, after the experimental treatment, all the scores exceeded 64% (cf. Table 13). The lowest group gain score was 3.12% which appeared in the IFI group on the test items relating to the property of the do-support for negative and interrogative construction (cf. Table 16, DS). The highest gain score reached 88.13% which was obtained by the EFI group on the focus function of the passive (cf. Table 16, FO). Although the initial scores of the simple past tense were already relatively high, ranging from 46.48% to 72.75%, noticeable progress can still be observed. Tables 7 and 8 show that both groups improved appreciably on the properties of the irregular past tense morphology (IR) and the anaphoric use of the past tense (AN). Figures 3 and 4 demonstrate respectively the overall improvement of the IFI and EFI groups on the acquisition of the 11 grammatical properties:

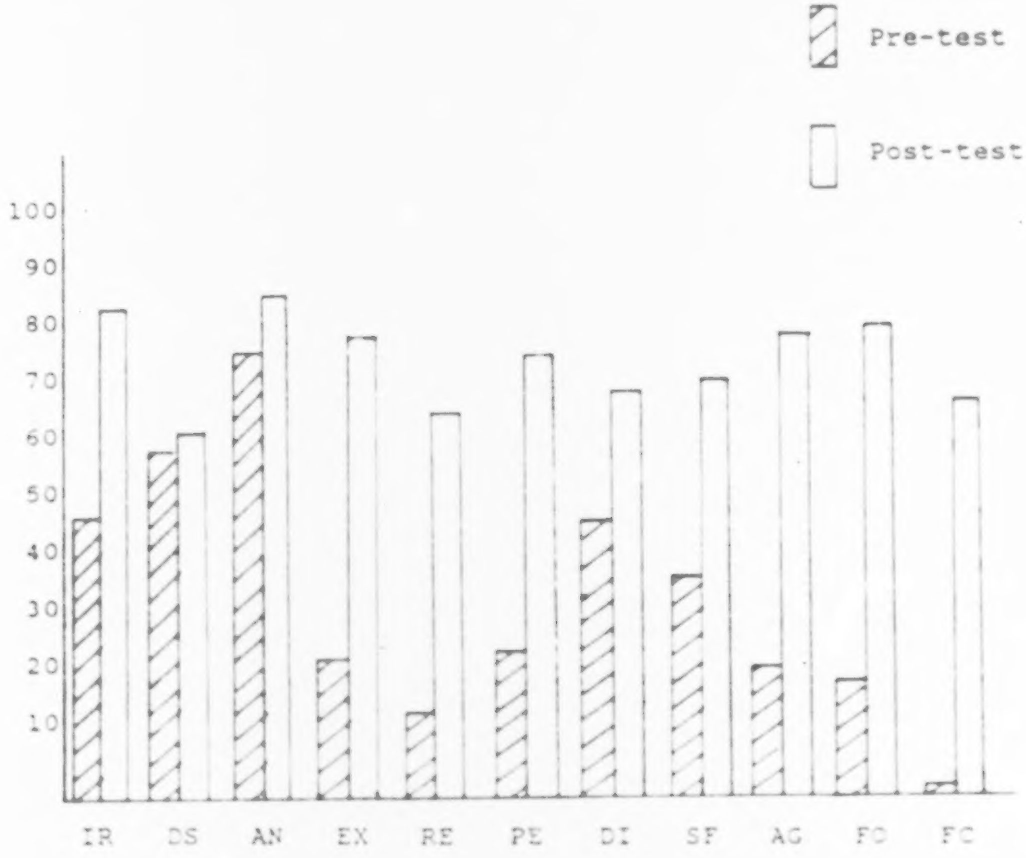

Figure 3. Overall Improvement of the IFI Group on the Acquisition of 11 Properties

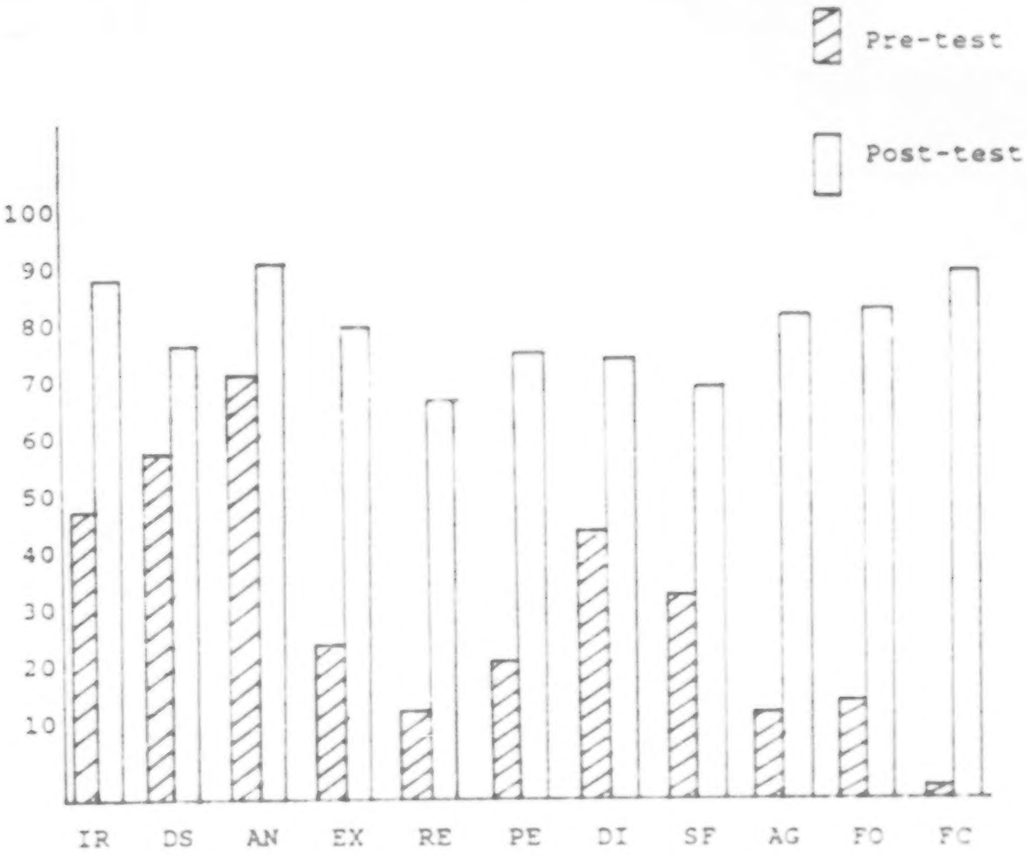

Figure 4. Overall Improvement of the EFI Group on the Acquisition of the 11 Properties

The evidence indicates that focusing learners' attention on the formal characteristics of grammatical features facilitates the rate/success of SLA. As was stated in section 3.1, the subjects in this study did not have any target language exposure outside the classroom. Therefore, the conspicuous improvement the subjects made can only be related to the amount of formal instruction they received in the classroom. Thus the proposal that form-based classroom teaching of specific linguistic properties and structures contributes to the acquisition of L2 learners has been confirmed by the findings from the present study.

b) Evidence for the Internalization of Grammatical Knowledge

It must be emphasized that the learners' post-test performance is not simply an indication of their familiarity with the test items. Rather, there is substantial evidence showing that they have internalized the linguistic properties and structures.

From the description of the task types in section 3.4 and the test papers in appendix I to V, we can see that most grammatical items in the achievement test were contextualized, involving the meaningful use of the target language. For example, in the sentence completion task, the subjects were required to finish the dialogue using non-verbal cues (cf. "Tom's diary" in Appendix I). In the same task, the subjects were asked to complete a passage with information given in the chart (cf. Appendix II). In the reading comprehension task, the learners were provided with several dialogues and their understanding of the temporal and aspectual properties would be a prerequisite to the correct inference (cf. Appendix III). The picture/action description task elicited the subjects' spontaneous use of the learnt structures (cf. Appendix IV, V). These tasks by and large examined the learners' internalized/acquired knowledge of the target language. The gain scores of the two groups and the significant difference between the pre- and post-test results reflected that after three weeks' instruction, the subjects had acquired to some degree some of the properties of the selected grammatical structures.

Hypothesis 2 states that explicit formal instruction is more effective than implicit formal instruction in accelerating the rate of SLA. Results indicate that the EFI group outperformed the IFI group in the five tasks. However, so far as the grammatical properties are concerned, this hypothesis is only partially confirmed. (cf. Tables 13, 16). Comparisons of the post-test scores given in Table 13 reveal that the EFI group excelled on the five properties, namely, Do-support in the negative and interrogative sentences (DS), difference between the simple past tense and the present perfect (DI), mapping of agent and patient to NP slots (AG), morphological properties of the passive, (FO) and the foregrounding/focus function of the passive (FC). Comparisons of the gain scores of the two groups given in Table 16 demonstrate that the EFI group did significantly better only with respect to AG and FC, and marginally FO. With regard to the acquisition of the other properties, the relative effectiveness of the two methods was about the same. The results raise an interesting and important question: why is explicit formal instruction useful in some syntactic areas, but not others?

a) Morphological Complexity of Tense Marking in English

In English, tense marking is morphologically complex, because it is not always suffixed to the verb stem. Sometimes it is suffixed to modals; at other times, it appears on aspectual elements or dummy DO:

e.g.: I could not go.
He had gone before I arrived.
I did not see him.

The regularities of tense marking in English can be summarized as follows:

i) In an affirmative, declarative sentence, tense marking appears on the first verbal element of the clause, whatever that is. It can be a main verb or an auxiliary verb:

e.g.: John left the classroom (main verb is inflected).
John could draw well when he was only five.
(inflection on the modal auxiliary)
John had turned off the light before he went to bed.
(inflection on the aspectual element)

ii) In negative and interrogative sentences, tense marking appears on the first auxiliary element if there is one (including modal and aspectual morphemes). If there is no auxiliary element, tense marking appears on a dummy DO:

e.g.: John was not singing.
Was John singing?
John did not pass the mid-term examination.
Did John pass the mid-term examination?

The variable positioning of the tense marker may present a serious problem for learners whose first language is Chinese, a language generally considered to be morphologically impoverished.

b) Lexical Idiosyncracy of Irregular Morphology

Another aspect of past tense morphology that poses problems for learners is the existence of irregular past tense forms. Irregular verbs, unlike regular ones, are not inflected with the -ed morpheme. Although some patterns can be found in how the past tense of irregular verbs is formed, which verbs take irregular tense morphology is entirely idiosyncratic. The learner has to identify the verbs that take on irregular morphology and this is no easy task. Past tense marking is morphologically complex, but is governed by regularities such as the conditions for the tense marking of dummy DO. Given the poor language environment, it would be difficult for the Chinese learners to induce such complex rules on their own from limited amounts of exposure. It is in this context that explicit instruction may be useful. In the EFI group, the abovementioned regularities were explicitly explained to the learners who may benefit from clear statement of the regularities on the part of the teacher. Our results indeed suggest that the EFI group benefited from the explicit statement of the tense marking regularities (cf. Table 13, 16).

c) Semantic Complexity of the Present Perfect

Results from this study reveal that there was no significant difference between the two groups with respect to the acquisition of the five properties of the present perfect (cf. Tables 13, 16).[5] A possible explanation for this finding is that the concept of aspect is semantically complex and abstract. On one hand, the present perfect, bears the core meaning of current relevance of a prior event; on the other hand, it carries shades of peripheral meanings (cf. Figure 1 "types of the present perfect, Comrie 1976, 1985). In our study, besides the core meaning of the present relevance, we explained to the EFI group the peripheral meanings. However, as indicated in Tables 13 and 15, the EFI group did not surpass the IFI group, in respect to their performance on these properties, suggesting that the explicit explanation of the peripheral meanings of the present perfect did not accelerate the acquisition rate.

The second noticeable point is that with limited exposure to the norms governing the use of the present perfect in English, it is difficult for the Chinese learner to derive the core meaning of the present relevance by implicit instruction alone. The expression of the current relevance is very subjective and abstract. Without explicit explanation of such meaning, the learners' will find it extremely difficult to correctly distinguish between the past tense and the present perfect. This claim is confirmed by the low score of the IFI group in the post-test (cf. Table 13, DI: 67.12%). What should also be mentioned is that although the EFI group performed significantly better than the IFI group in the post test, the comparison of the gain scores between the two groups did not show any significant difference, lending further support to the idea that the core meaning of the present perfect is one of the evasive areas for Chinese learners.

d) Explicit Instruction Accelerates the Acquisition of the Passive Construction

In this study, the EFI group had outstanding performance on the passive construction. Significant differences can be discerned in all the three properties of the passive construction, either in the comparison of the post-test scores or the gain scores (cf. Tables: 13, 16). A possible explanation is that the selected properties of the passive construction are less complex than tense and aspect in respect to their structures and meanings.

i) Mapping of semantic roles to NP slots

This property only involves a syntactic operation, that is, the interchange of the subject and object noun phrases. An explicit statement of the mapping of the agent and patient to different NP slots greatly facilitates its acquisition. Notice that in the pre-test, the IFI group outperformed the EFI group (P = 0.031). However, after the experimental treatment, the EFI group did significantly better than the IFI group (cf.Tables: 13, 16).

ii) Passive morphology is simpler than past tense morphology:

The following schema shows that the passive morpheme, unlike that of the past tense, is attached to a fixed position. The passive *be* is always located between the auxiliary and the verb,[7] and the passive *en* always appears suffixed to the verb.

NP_1 AUX V NP_2

NP_2 AUX be V+en by NP_1

In our experimental lesson, the position of the passive morpheme, as well as two common errors related to passive morphology: subject/verb concord and insertion of dummy *do*, were directly explained to the EFI group. The results of the spontaneous production task (a picture description task) reveal that the subjects in the EFI group had performed significantly better than the IFI group, suggesting they had internalized the morphological rules involved in passive formation.

iii) The foregrounding function of the english passive

In English, the passive construction is used when one wants to foreground or draw attention to the result or the patient. This has to do with the fact that the subject position is considered to be a salient position in the sentence. The subject of the passive structure, where the patient NP is located, is therefore highlighted or emphasized in some sense (cf. Keenan, 1985).

In the Chinese classroom, the foregrounding or focus function of the passive is seldom explained to the learner. The common practice in the teaching of the passive structure is sentence transformation. The learners are asked to convert active sentences into passive ones, or vice versa. The consequence is that the learners do not know when to use the passive structure. Again given a relatively impoverished learning envioronment, it is difficult for the learners to induce this function from teachers' use of passive structures by mere exposure. Given this context, it seems plausible that explicit description of the foregrounding function of the passive will facilitate its acquisition. In our experiment, the explicit explanation of this property to the EFI group proved to be an aid to the learners. The results of the picture description test indicate that the EFI group did markedly better than the IFI group.

Findings from this study appear to be in favour of the interface position. The action/picture description task of this study, which required an internalized knowledge of the three selected structures allows us to examine the interface position on a small scale. Results of the learners' performance on this task reveal that the EFI group significantly outperformed the IFI group in spontaneous language production, lending support to the possibility of transfer of explicit grammatical knowledge into the learners' competence. Krashen's theory seems incapable of handling the superiority of the EFI group over the IFI group.

6. CONCLUSIONS

In this study, we examined the absolute effect of formal instruction on the acquisition of the three grammatical structures by the Chinese adolescent learners of English. The overall results seem to support the general conclusion that form-based classroom instruction facilitates SLA. However, our findings do not suggest that explicit instruction is always a better means to accelerate the rate of acquisition. Rather they indicate that explicit instruction is more effective in teaching the less complex properties and structures such as the mapping of agent and patient to NP slots and the morphological properties of the passive construction. In respect to the more complex properties as the semantic meanings of the present perfect, explicit instruction did not show any superiority over implicit instruction. This finding is compatible with that of Van Baalen (1983).[8] A tentative conclusion can be drawn that explicit instruction is effective with simple rules but not so with complex ones. Results from this study appear to be in favour of the interface position, but because of the small size of the sample and limited number of test items, no conclusion can yet be drawn. More empirical studies are necessary to explore why explicit knowledge can be transferred into implicit knowledge and which method is most effective to accelerate this transference. This might be a profitable line for future enquiry.

Notes

1) This article is based on a portion of the author's M.Phil. thesis prepared under the supervision of Dr. Thomas Lee at the Chinese University of Hong Kong. I wish to thank Professor William Rutherford and Rod Ellis for their helpful comments on an earlier version of this paper presented at the International Conference on Syntactic Acquisition, CUHK, 1989. Special thanks are due also to Ms. Lao Zhi-xiu of Beihai Middle Schooland her lovely students who made this project possible. I am indebted to the Lingnan Foundation, the United Board of High Christian Education in Asia and the Weixin Group of Hong Kong for finantial support, without which the study would not have been successfully completed.

2) The average academic score was obtained on the basis of two scores: the score on the mid-term examination and the average score of a series of quizzes held in their regular English course.

3) Because of the communication gap between the investigator and the teacher of English in Beihai middle school, the past tense had been taught before the experiment. But based on the mean scores of each group in the pre-test, we may claim that before the experiment, the subjects had not acquired the selected grammatical properties. Note the pre-test mean scores given in the following figure for the three areas under investigation:

	the past tense		the present perfect		the passive construction	
	EFI	IFI	EFI	IFI	EFI	IFI
X (percentile)	58.59	59.65	29.36	28.83	33.73	34.93

4) No significant difference was found in the IFI group on the property of DS (P=.633). However, there were significant differences for the other 10 properties and for the task types as well (P < .01).

5) The achievement score was obtained by averaging the scores of the five learning tasks, that is, error detection, error correction, sentence completion, reading comprehension and spontaneous language production.

6) A significant difference was found in the post-test in respect to the property of the difference between the simple past and the present perfect (DI). However, the comparison of the gain scores of the two groups did not show any significant difference (p=.109)

7) Adverbs are excluded from the discussion here.

8) In Van Baalen's study, it was found that the pupils who received explicit instruction equal those pupils who were exposed to more implicit procedures in the case of more complex structures (do-support and -ing form), while with less complex structures (SVO-order and 3rd person -s), the expicit group outperformed the implicit group.

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Appendix I. Sample of Sentence-Completion Task A

This is Tom's diary. Answer the questions with the information you get from the diary.

(下面那段材料是汤姆的日记,根据日記内容回答问题)

Monday, 9.00	meet Mr.Ford at the Guest House,(宾馆)
11.00	fly to Beijing,
Tuesday,	not feel well, catch cold, stay at the hotel,
Wednesday morning,	visit Qinghua University,interview some students and teachers,
afternoon,	Write a report, send it back to Xinmin Evening Newspaper(新民晚报) by telex, (电传)
evening,	phone Sam Jones, invite him to the concert,
Thursday,	leave Beijing, go to Chang chun by train,
Friday,	visit Jilin Univerity, meet some friends,

Questions: 1, When did Tom fly to Beijing?

He________________________________.

2, Did he do anything on Tuesday? Why?

___________________________________.

3, What did he do on Wednesday?

He__________________________________.

4, Did he invite Sam to visit the friends?

____________________________________.

5, Did he leave Beijing during the weekend?

____________________________________.

(Complete answers are required)

请用完整句子回答

Appendix II. Sample of Sentence-Completion Task B

Look at the chart below and fill in the blanks according to the information you get from the chart.

（看下面的图表，根据图表内容填空）

Beijing is in the north of China. It often snows in winter. The following chart is the record of the weather forcast.

Monday:	cloudy
Tuesday:	rain and snow
Wednesday:	snow
Thursday:	heavy snow
Friday:	rain and snow
Saturday:	snow

It is Sunday today. Xiao Fang is at home. She ________(stay) at home since ________, because it began to snow that day. She telephoned Li Hua early in the morning. Li Hua said, "I will come before 10 o'clock." So Xiao Fang began to wait for her. It is three o'clock in the afternoon, but Li Hua is still not here. Xiao Fang ________(wait) for LiHua for _________.

Appendix III. Sample of Picture-Description Task

a, Look at the pictures and fill in the blanks according to the information you get from each picture.

（看下面的图画，根据图画里的内容填空）

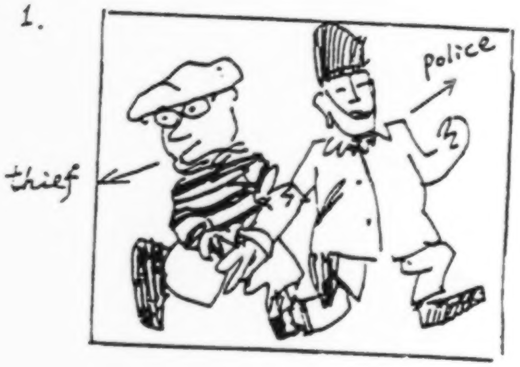
1, ____________ have been caught by ____________.

2, ____________ has been found by__________ at last.

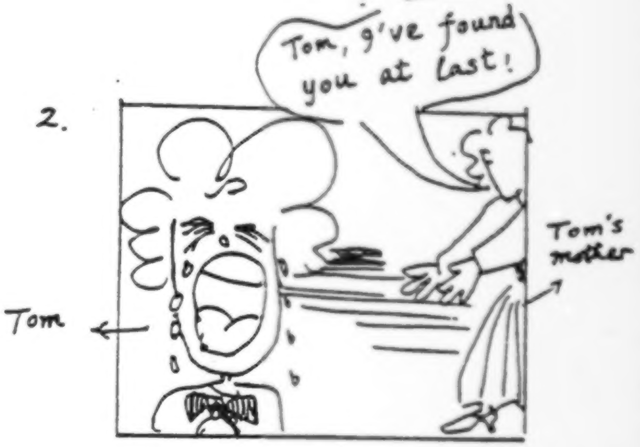
3, ____________ was invited by _______ to go the concert.

4, ____________ was taken care of by _________.

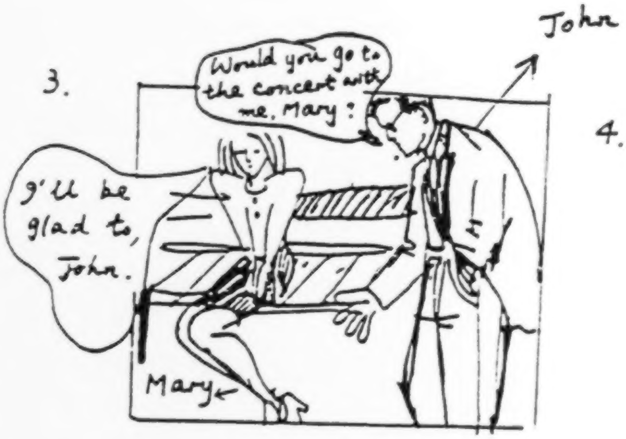
1.


police
thief

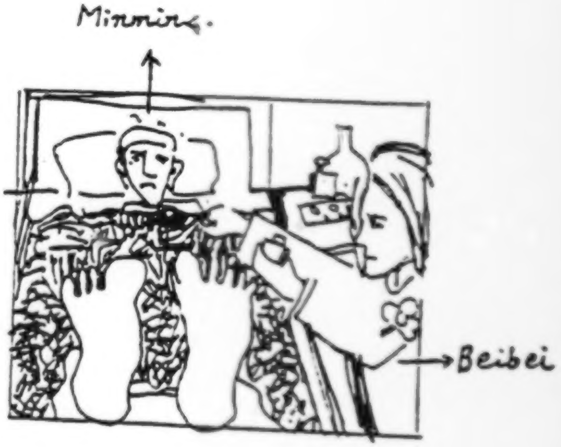
2.


Tom, I've found you at last!
Tom's mother
Tom

3.


John
Would you go to the concert with me, Mary?
I'll be glad to, John.
Mary

4.

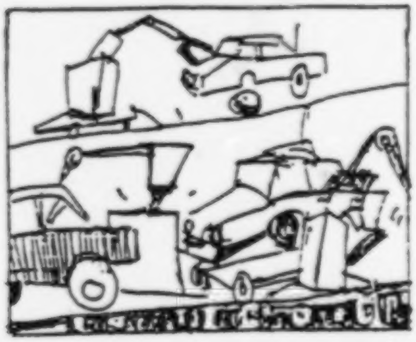

Minming.
Beibei

BEST COPY AVAILABLE

b, Make up a sentence to describe what is happening in each picture, using the word given.

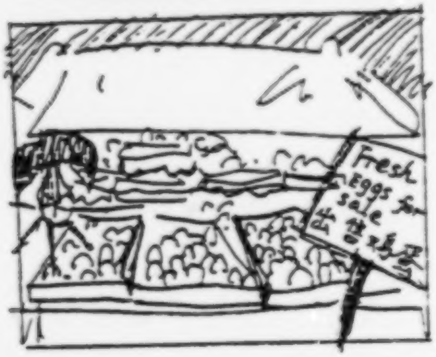
(用所给的词造句,说明图画里的内容.
每个词造一句句子.)

1,



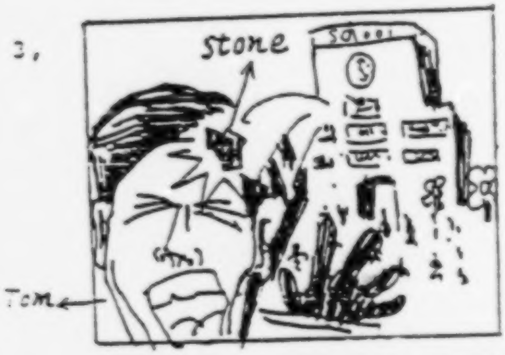
make,

2,


Fresh Eggs for sale
出售鸡蛋

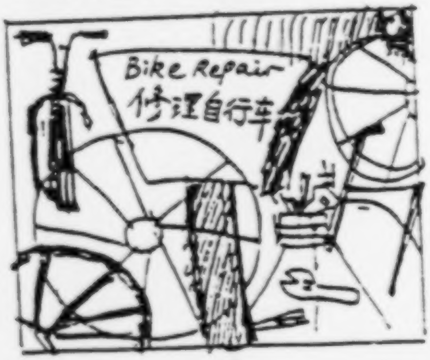
sell

3,


Stone
School
Tom

hit

4,


Bike Repair
修理自行车

repair

Appendix IV. Sample of Reading Comprehension Task

Read the following English and Chinese sentences. Indicate which Chinese sentence gives the correct inference of the English sentence.
(读下面的中英文句子. 指出哪句中文句子最正确地表达了英文句子的意思.)

1, Jane: Have you received any letter from John?

Bob: No. But he has come to Shanghai.

a, 约翰现在在上海.

b, 约翰现在不在上海.

c, 约翰现在是否在上海不清楚.

2, Jane: Have you received any letter from John?

Bob: No. But he came to Shanghai the other day.

a, 约翰现在在上海.

b, 约翰现在不在上海.

c, 约翰现在是否在上海不清楚.

3, Dr.Guan is watching the football match on TV. His student is talking to him.

student: Dr. Guan, you like to play football, don't you?

Dr. Guan: Yes, indeed. I watch football match on TV every weekend. I played football when I was young.

a, 关博士现在还踢足球.

b, 关博士年轻时踢足球, 现在不踢了.

c, 关博士现在还踢不踢足球不清楚.

Appendix V. Sample of Action Description Task

Look at the teacher's performance and use the following words to describe the series of actions that the teacher carries out. Pay attention to the tense you use.

(看老师的动作用下面的词和词组描述老师所做的一系列动作.)

1, show, put on, take off, give,
2, take out, open, take out, close,
3, put on, take off, put on, go out,
4, hide, take out, read, throw,
5, fall down, sit on, stand up with pain, go out,

The action description task was based on Carlota S. Smith's (1979) experiment on the L1 acquisition of tense and aspect in which the subjects were asked to describe actions performed by the experimenter. It was assumed that action description elicited acquired knowlege of the language. The following section illustrates a series of actions performed by the investigator of the present study:

The investigator put on a white coat, took it off, put on a red coat and then went out.

The following description will count as a correct answer: "The teacher put on a white coat. She took it off. She put on a red coat. She has gone out." The first three sentences should not have current relevance and should have the simple past tense; while the last sentence should appear in the present perfect.

AN ESSAY ON TOFFEE APPLE AND TREACLE TART, BEING AN IMITATION OF COCKNEY PUNNING FOR TOEFL AND TEASL.

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Time was when one either learnt English or one didn't, either one knew English or one didn't. That straight forward position has since been defined as a two-tiered system, English as a second or non-native language and English as a first or native language. With that shift in perspective has come the burgeoning industry of Teaching-English-as-a-second-language. Thus, like Adam and his animals, with naming comes being, and ontology is coupled with concept. Trained-profetssional-specialists now know the entity called non-native-English and it is the language non-English, non-Australian, non-American, etc., people are to study and learn. The phrase second language is meaningless without its being measured against a first. The first-and-native-English-language is the ideal standard against which is pitched the second-rate imitation. Presumably, the latter, at its very best, can only be a tolerable version of the former.

Now that it has a name, it can be presented to the non-native learner of English as a neatly circumscribed and nicely packaged subject. His position in relation to the subject is clear, he is a second-language learner and he is to achieve the maximum standard of a second language user. For him to aim for anything beyond would be unthinkably pretentious or down-right indecent, possibly immoral. This attitude is sufficiently accepted by one and all for the native-speaker to take for granted his position of unquestioned superiority, while the second-language speaker languishes behind a taken-for granted inferiority.

That was by way of introduction. The following will examine the teaching-of-English-as-a-second-language in different lights from different angles. Among other things, TEASL is an educational situation, a pedagogic activity; it is not a subject like history, physics or English. It is a very complex situation which takes in more factors than pedagogy alone; it bears examination like a piece of glass with multiple facets.

1. Language acquisition is an intellectual process; for the foreign student, it does not come "naturally". A native language is by definition unavailable to anyone not born to it. It would be unrealistic for the student to aim for "native" fluency as an initial goal. Instead, he can concentrate on using the learnt language as a tool for thought. Understandably, this is no easy task as two different processes of learning are at work side by side: language acquisition and the clarification of thought. However, learning will thus by put where it belongs, that is within the confines of mental capacity and not within the prescription of a native condition. Surely, this approach is particularly apposite to the contexts of a university. To think clearly is the ambition of any intelligent person in any language. It is just conceivable that the non-native's struggle with language ability stimulates rather than deters conceptual ability, for effortful articulation needs subject matter to work on. Alternatively, not every native-speaker is articulate by virtue of his being just that.

The two-tiered classificaiton of language usage can give a false impression of clarity, it can oversimplify a very complex situation in which native speakers and non-native speakers blur the lines between language ability and thinking ability in their usage of language. It is not within the scope of this essay to address such complexities; it merely cautions against smugness on the part of the native language user and against an excuse for laziness on the part of the non-native language user. In any case, the terms native-speaker's English and non-native speaker's English do not add up to clear categories. As English becomes more international, it necessarily becomes less English. Auden's words about Yeats helps me to make my point,

Now he is scattered among a hundred cities
And wholly given over to unfamiliar affections,
To find his happiness in another kind of wood
And be punished under a foreign code of conscience.
The words of the dead man
Are modified in the guts of the living.

(W.H. Auden, from "In Memory of W.B. Yeats")

American English alone testifies to how English has become very un-English indeed, and yet it goes by the name of English all the same. There are universities in England which offer courses on English-American comparative studies. Thus, English and American are both different and the same, a sure sign that English has become "modified".

2. The goal for the second-language learner, however remote, must be that of mastery; fluency of one kind or another will come of its own accord once the language begins to feel pliable and of service. For mastery, the student does not go to every Tom, Dick or Harry of a native speaker, he goes to the proven masters of the language, and there are hundreds and hundreds of them, from poets to politicians, from lawyers to philosophers, to the occasional scientist, etc.

This leads to an embarrassing situation vis-a-vis the teachers of English-as-a-second-language. They come from an endless variety of disciplines; provided they have a diploma in teaching-English-as-a-second-language, they teach it. They may also be very impressive specialists who know all about testing, comprehension, language-acquisition, etc., but who cannot tell a bad line of, say, Tennyson's from a good line of Tennyson's, simply because they have not read Tennyson and do not intend to. The fundamental questions remain: how well do they know the English Language in terms of its achievements over the ages? How well will they be able to guide the foreign student as to what is good English and what is merely hackneyed? Surely, it is reasonable enough to ask teachers of English how well they know English and how good their own English is. The story goes that Winston Churchill did badly in Classics at school because he spent his time studying the English Language. A good command of English didn't come "naturally" even to a Churchill!

3. The standard of English in Hong Kong has been falling, we are told. Jeremiads have been ponderously and urgently delivered from various quarters of power and authority in the colony, claiming that the end of good English will also bring the end of Hong Kong's "prosperity" et al, considering how Hong Kong must remain an international centre and that English is the international language. A most charming method of redress has recently been introduced which uses English pop-songs for teaching English. Well and fine, we might even brighten up Legco chambers and directoral board-rooms with our future bright young things talking to the tune of

"Tall and tan and young and lovely, the girl from Ipanema goes walking", or "Try to remember the kind of September when you were a young and callow fellow". It is anybody's guess as to why such language samples are better tools for learning than, say, "Our dynasty came in because of a great sensibility" (E. Pound, from "The Cantos"), or "The best lack all conviction while the worst/Are full of passionate intensity" (W.B. Yeats, "The Second Coming").

The end of the world may or may not be imminent, but whether it comes as a result of "falling English standards" is another matter. Does good English make or break a career, one asks? "Let observation, with extensive view,/ Survey mankind,...." (S. Johnson, from "The Vanity of Human Wishes") from Hong Kong to Kowloon: there is for example the top tycoon who prefers to speak English "ungrammatically", there is the top banker whose delightful Scottish accent prevents some of his colleagues from understanding him, there is the marvellous politician who does not venture beyond platitudes and repetition, when speaking in English. One suspects that one has to "make it" first and then have one's English accepted as it is. Japan looms large as an example. It is possible, just possible, that English is not as vitally important as it is made out to be. This sense of importance may be an expression of imperial sensibilities that have come to roost in its language when the empire itself has disappeared. Know English for what it's worth (and it's worth a great deal in the hands of masters) and get on with it, without the shackles of any mystique that may be attached to it as-a-first-language or as-a-second-language. At the same time, it is reasonable to assume that Hong Kong English (if there is such a thing) will be prefectly acceptable if Hong Kong business carries on as usual, not vice-versa.

The state of "falling English standards" is not a local monopoly. About a decade or so ago, Harvard University noted this phenomenon among its students and the authorities there considered making Year 1 Composition compulsory for all students. In England, teachers complain that on average, students nowadays make more grammar mistakes and cannot spell, and they say it is because grammar schools, where Latin was taught, have become obsolete. Now, there is a curious and fascinating coincidence in the non-native language picture. As teaching-English-as-a-second-language becomes more and more an established discipline, as the industry daily grows, complete with tapes and special recordings, books with the appropriate questions and exercises to aid and educate the foreign learner, specialized materials prepared by specialists specially tailored for situations and levels that have been carefully deduced from highly controlled tests, the more these very specialists complain of poor English standards. The two events appear to have developed in direct proportion to each other. I look forward to a specialist evaluation of this scenario as to whether it is coincidence or an actual cause and effect relationship.

4. Eight thousand or so miles from the United Kingdom, the term native-English takes on a clarity and finality prescribed by distance. England and its native-England-language lie that-a-way, the imaginary signboard says. I'm reminded of an actual signboard on the M1 as you leave London which says in one universal sweep, "The North". You can well appreciate the immense simplificaiton of that sign when you recall that there is more of England north of London than there is south of London. (Albeit now they call it once again a country of two nations and the south dominates even more than normally).

It doesn't take much experience with the language to realize that English is anything but monolingual or homogeneous, there are many Englishes even within England itself. The most obvious demarcations are regional, class and educational ones. Among those, class language is the most difficult to pin down. By its very nature, class language is beyond definition. Class language is natural to a particular class; to members of that calss, such usage and none other is English as understood by them. A friend (English) once remarked that some English people didn't speak English, the example she gave was as follows. She went into an ordinary London cafe and asked for a roll. The waitress very kindly advised her against it, as the bread was "stile". That was twenty plus years ago; to this day, she still cannot translate "stile" into "stale". For her, the English waitress simply didn't speak English.

Another equally precise person once complained to me that she was surprised at my inviting to tea together with her someone who wasn't even nice. Let me try to illustrate. XY complained that AB was not even nice. Had AB known about that comment, she would certainly have said that XY was not nice to think her not nice. The question is, who is nice? Are they both nice or are they both not nice? The answer lies in the fact that "nice" means rather different things in different class languages. What XY was saying was that AB should not have been included because she did not even belong to the same class. But to say it so plainly would not be "a nice thing" to do. It is "nice" to assume the whole world to be "nice". In order to make that a reality, you associate only with "nice" people. You do not even acknowledge the existence of "not nice" people, let alone their language. By the very same token, that la-di-da, hoity-toity, plummy speech is not quite English either to your solid salt of the earth, for whom stale (if you insist) is stile and nothing else.

It is hoped that this essay has muddied the waters enough so that nothing is simply what it appears to be.

Teaching-English-as-a-second-language will continue from strength to strength in terms of a discipline and an industry. Whether it will be rigidly circumscribed by a prescriptive point of view, which ignores the real educational situation, or whether it will be handled with intelligence, subtlety and imagination remains to be seen.

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